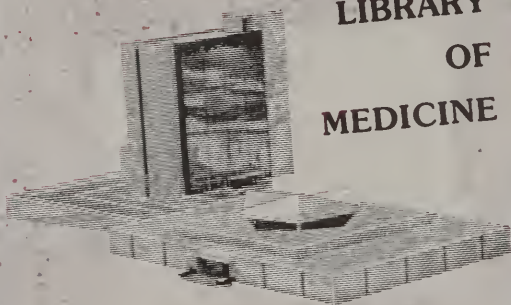


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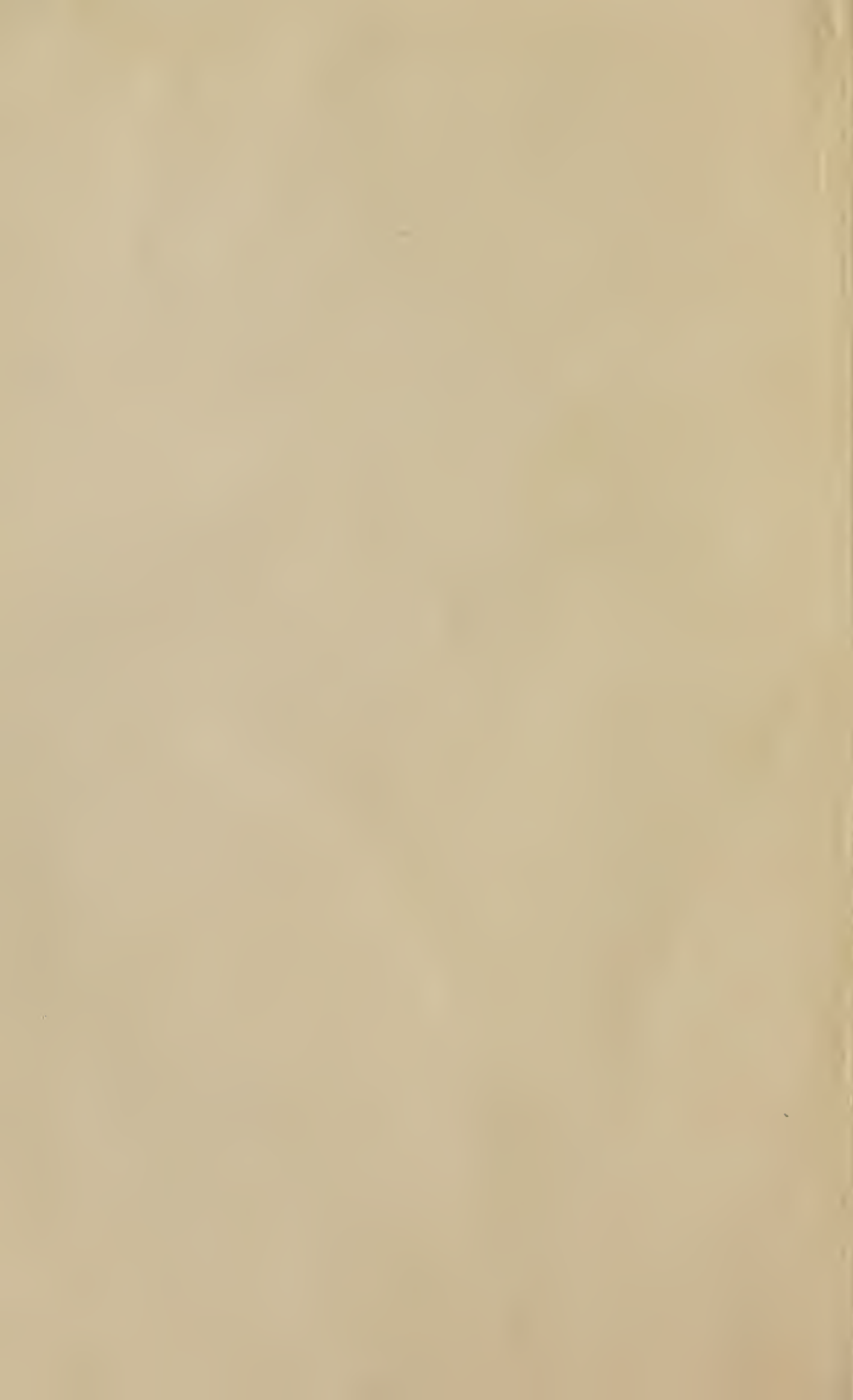


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Papers
ON THE
Milwaukee Test
OF THE
Thirtieth Dilution,

BY
SAMUEL O. L. POTTER, A.M., M.D.
AND
LEWIS SHERMAN, A.M., M.D.

WITH THE REPORTS OF THE
MILWAUKEE ACADEMY OF MEDICINE
ON THE RESULT.



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A TEST
OF THE
EFFICACY OF THE HIGH DILUTIONS.

PUBLISHED BY THE

Milwaukee Academy of Medicine.

December, 1878.

Communications should be addressed to the Secretary,

ALBERT SCHLÖMILCH, M. D.,
491 THIRD STREET,
MILWAUKEE, WISCONSIN.

CRAMER, AIKENS & CRAMER, PRINTERS,
Milwaukee, Wis.

A TEST

OF THE

EFFICACY OF THE HIGH DILUTIONS.

Extracts from a Paper Read by Lewis Sherman, M. D., before the
Milwaukee Academy of Medicine, Nov. 5, 1878.

There are two ways of determining the curative properties of a drug, *viz*: *first*, by observing its effects on the sick; *second*, by observing its effects on the healthy. The former method, being apparently most simple, natural and direct, has been employed from time immemorial to the present day. The latter method was introduced as a part of a system of medicine about eighty years ago by a now noted German physician.

In regard to the reliability of tests made on the sick, it is important to observe that, *theoretically*, they are very untrustworthy, because no physician is competent to testify in any individual case of sickness in which drugs have been administered, what might have been the result if the drugs had not been administered. The scientific physician does not say, "I gave the drugs A, B and C, and they cured my patient," but rather, "I gave the drugs A, B and C, and afterwards found my patient well."

Practically, the results obtained by experimenting with drugs on the sick are immense accumulations of disjointed facts, which prove one thing to one observer and another thing to another observer. In millions of instances have various drugs been given to the sick, and in millions of instances the sick have afterwards recovered their health. Each experimenter on the sick is prepossessed in favor of certain drugs for the cure of certain diseased conditions, and he readily finds among the millions of recoveries after drugging, a sufficient number of cases to convince him that his favorite remedies are good.

A very ancient medical writer, cotemporary with Hippocrates, learned from his experience and that of his predecessors that *prolapsus uteri* could be cured by fomentations of bad smelling substances applied to the mouth of the vagina; that flexions of the uterus depending on want of tone could be cured by fomentations with the urine of a man, and that sterility could be cured by the introduction of bruised maggots.

* * * * *

Among the remedies recommended by Galen, whose authority reigned supreme in the medical schools of Europe from the second to the fourteenth century, were bile, sweat, urine, saliva and excrement of man and various other animals, preparations from vipers, foxes, hyenas, weasels, grasshoppers, earthworms, bugs and Spanish flies; also bones, marrow, horns, liver, nails and skin; cobwebs, oysters, eggs, snails, crabs, sponges, etc.

Ancient medical writers gave minute directions for the use of the talismanic word, *Abrocadabra*, in the cure of agues and other fevers.

The learned Serenus Sammonicus directs that the word be written on paper in the form of a triangle:

A B R A C A D A B R A
 A B R A C A D A B R
 A B R A C A D A B
 A B R A C A D A
 A B R A C A D
 A B R A C A
 A B R A C
 A B R A
 A B R
 A B
 A

that the paper on which it is written be folded in the form of a cross and suspended from the neck by a strip of linen, so as to rest on the pit of the stomach; that the word be worn in this way for nine days, and then, before sunrise, cast behind the wearer into a stream running east. Other writers directed that the word be frequently repeated by the patient.

Thousands upon thousands of cases of scrofulous eruptions and other cutaneous diseases are reported by the highest official authority to have been cured by the touch of a king. To this day these diseases go by the name of King's evil. These cures have not taken place once only; they have arrived to the status of a national institution. They have not one witness merely, but millions; they have had successive generations of witnesses. Guibert de Nogent speaks as an ocular witness of cures effected in his day by Louis the Fat. Those effected by Louis IX are mentioned in proper terms in the bull of canonization. Charles VIII touched and cured many cases of King's Evil. These facts have been carefully verified and the authors who mention them remark that they were not imaginary, because little children were among the cases cured.

As an illustration of the gradual rise in the development of Medical Science from the time of Hippocrates to the present day, I may mention the treatment of Charles II of England, in his last illness, by the highest talent the British government could command in the year 1685. The King was bled enormously, his head was shaved, a red hot iron was applied to the scalp, and a loathsome volatile oil, distilled from dead men's skulls was forced between his lips.

Some neophyte in the profession may be inclined to sneer at these prescriptions, but they have stood the test of experiment on the sick, and as a result have gained a place in medical literature.

Twenty-three centuries later than the first mentioned author, in the age of printed books, medical colleges and Doctors of Medicine, the pharmacopœias describe and the pharmacies find a ready sale for preparations from cobwebs, spiders, egg-shells, oyster shells, sponges, honey-bees, Spanish flies, crabs, bed-bugs, cockroaches, beetles, wasps, earth-worms, the preputial secretions of a species of deer, the prepuce of the beaver, the odorous excrescences found on the inside of the leg of the horse, the aromatic liquid emitted by the skunk, cuttle fish juice, plant lice, parasites which infest the common house-fly, the poisons of snakes and toads, ox-gall, fox lung, ashes, anthracite coal, charcoal, corn smut and small-pox scabs. Our periodical literature reports many cures with vaccine virus, serum from itch postules, the poison of glanders, mad-dog, syphilitic and gonorrhœal virus, dog's milk, skim milk, the first milk of

a nursing woman, sugar of milk which has been exposed to direct sunlight, then bottled and labeled "*Sol*," etc., etc.

Several eminent professors in Homœopathic Colleges have gravely recommended and practiced version of the *fatus in utero* by administering to the mother, *Pulsatilla* in various preparations, from the tincture to the two hundredth dilution.

At a period within the memory of persons now living, agues were cured by incantations, by the wearing of charms and amulets or by the patient's tying a string around the limb of a tree as many times as he had had chills.

Only a few years ago as we all remember, *experienced* medical men warned against the danger of allowing fever patients to satisfy their thirst with cold water. Now cold drinks are found by *experience* to exert a salutary effect in fevers. Blood-letting has been proved by *experience* to be an indispensable agent in the healing art, and one of almost universal applicability. Again, *experience* has proved that the blood-letting treatment is worse than useless. *Experience* has taught the medical profession that the continued use of large doses of Mercury furnishes the best means of eradicating the poison of Syphilis and curing fevers, dyspepsia and most mild ailments. Later *experience* has taught that small doses of Mercury are better than large ones and that often the patient recovers without any Mercury. * * *

I have used the word "experience" in the commonly accepted sense, viz: *the accumulated observations of individual physicians on individual cases of disease*. The statistical results of properly conducted experiments have a real scientific value; but experiments on the sick can rarely be performed except in hospitals, where it is possible to divide into two or more classes a large number of patients suffering from a disease which has a somewhat uniform natural course, and to put each of these classes on a different course of treatment, and tabulate the results for study. A few such experiments have been made, and even these have done more to establish truth and eradicate errors in medical practice than all of the ordinary "experience" which has accumulated in the whole history of medicine.

The *second* method of determining the curative properties of a drug, viz: by observing its effects on the healthy, involves scarcely any of the chances of error which vitiate the former method. If a drug appears to produce the same or similar effects on a large proportion of the healthy persons who take it, it is a comparatively safe inference that the drug produced those effects. If ten healthy persons take each a dose of morphine, and within an hour all fall into a stupid sleep, it is a comparatively fair inference that the drug caused the sleep. But, if ten patients suffering from Dysentery are dosed with morphine for a week and all regain their health, the fact does not signify that morphine was essential to the cure, or even that the drug was not detrimental in every case.

A difficulty in this second method consists in translating pathogenetic symptoms into therapeutic indications. There is no doubt that there are fixed and ascertainable relations between the effects of any drug on a healthy animal organ or tissue, and the effects of the same drug on a diseased organ or tissue. Whether a medicine be given to remove symptoms like those it produces, or diseased states opposite to those it produces, *its effect on the healthy may guide in its administration to the sick*. If the law, "*Similia similibus curantur*" is of very general applicability,

then there can be but little chance of error in using the results of experiments on the healthy as a guide in the selection of remedies for the sick.

Another difficulty is in excluding those symptoms which may occur in a healthy person after taking the drug, but which are not produced by the drug. The importance of great care in this particular is illustrated by Dr. Conrad Wesselhoeft's "Reproving of *Carbo vegetabilis*," published in the *Proceedings of the American Institute of Homoeopathy* for 1877.

Hahnemann and many of his followers have made "provings" with the thirtieth centesimal dilutions, and the symptoms observed in the "provers" have been incorporated into our standard works on *Materia Medica*, in such a way that is difficult if not impossible for a student to determine in reference to many symptoms, whether they were produced by the drug or not. There are men in the profession who claim that pathogenetic as well as therapeutic effects are produced by the thirtieth dilutions, and that provings made with these preparations represent the disease-producing properties of the drugs after which they are named.

In view of the *a priori* improbability of the truth of this claim and of its importance, if true, I propose a scientific test of the pathogenetic and therapeutic action of the thirtieth Hahnemannian dilution. The object of this test is to determine whether, or not, this preparation can produce any medicinal action on the human organism, in health or disease.

A vial of pure sugar pellets, moistened with the thirtieth Hahnemannian dilution of Aconite, and nine similar vials, moistened with pure alcohol, so as to make them resemble the test pellets, shall be given to the prover. The vials are to be numbered 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10. The number given to the Aconite vial shall be unknown to the prover, and it shall be his task to determine which of the ten vials contains Aconite.

These preparations are to be put up with the greatest care, in the presence of the members of the *Milwaukee Academy of Medicine*, and then placed in the hands of an unprejudiced layman of unimpeachable honor, who shall number and dispense the vials as they are called for by the provers.

The provers must be physicians of acknowledged ability, who possess a good knowledge of the recorded symptomatology of Aconite, and who have faith in the efficacy of the thirtieth dilution.

If a hundred physicians engage in making the test, and all or nearly all single out the Aconite pellets, the inference will be that the thirtieth dilution represents the medicinal properties of Aconite.

If only about ten of the hundred succeed in the trial, the inference will be that the thirtieth dilution of Aconite possesses no medicinal properties, for, according to the laws of probabilities about one in ten would guess right without making any trial.

Preparations of *Arsenicum album*, *Aurum metallicum*, *Carbo vegetabilis*, *Natrum muriaticum* and *Sulphur* in the thirtieth Hahnemannian dilution, made with the same precautions and care as this of *Aconitum*, shall be used as a test of the therapeutic powers of the thirtieth dilutions. In consideration of the inconvenience of experimenting on the sick, arising from popular prejudices, the number of vials of "unmedicated" pellets may be limited to one for each remedy, and the experiments tried mostly in chronic diseases. The real gain to the healing art, which will be accomplished by the establishment of the truth or falsity of the theory of "potentization," will amply compensate for the risk of delaying a few cures.

The experimenters must be physicians of acknowledged ability, who possess a good knowledge of the therapeutic indications of the remedies tried and who profess faith in the efficacy of the thirtieth dilution. If in this trial there be about one hundred per cent. of successes, the inference will be that the thirtieth dilutions have curative powers. If there be only about fifty per cent. of successes the inference will be that the thirtieth dilutions have no curative powers.

If those who advocate the use of these preparations refuse to participate in the experiment, the profession will have reason to suspect that they are insincere.

If the result of the test should be, to prove that the thirtieth dilution of a drug can make the sick well or the well sick, then it must be acknowledged that in this a great discovery has been made in Physics as well as in Medicine, and the science and ingenuity of the civilized world will be set at work to find out the useful applications of the discovery.

If the result should be, to prove that the thirtieth dilution has no such powers as it is claimed to have, then the medical profession has a right to demand that the symptoms supposed to have been produced by the thirtieth and higher dilutions be expunged from our *Materia Medica*, and that advocates of the potentization theory shall henceforth cease to prate their "cures" in medical journals and before medical societies, which are avowedly devoted to the interests of Science.

Report of a Committee appointed by the Milwaukee Academy of Medicine, for the Purpose of Making Arrangements to Prepare a Scientific Test of the Efficacy of the Thirtieth Hahnemannian Dilutions.

MR. PRESIDENT: Your committee have carefully considered the plan proposed in Dr. Lewis Sherman's paper, for testing the efficacy of the thirtieth Hahnemannian dilution, and we are unanimously of the opinion that the test proposed in that paper is fair and honorable, and that the interests of science demand that it should be made.

We recommend,

That our society undertake to carry out the provisions of this test, and that to this end the essential features and the practical details of the test be given for publication as soon as practicable to every regular Homœopathic periodical printed in the English language; and that translations of the same be sent to every known regular Homœopathic periodical printed in foreign languages; and that all other appropriate and accessible means be employed to give the test publicity.

That the directions given by Hahnemann for the preparation of the thirtieth dilution be followed with the most scrupulous exactness; that the alcohol used be of the purest quality obtainable, and that to this end, a quantity of the best, so-called "Homœopathic Alcohol" be redistilled in glass for the purposes of this test.

That the Rev. Geo. T. Ladd, of Milwaukee, be selected to number and dispense the vials of test pellets as they are called for by the provers and experimenters; and that he give a solemn pledge that he will not, in any manner, reveal to any person which of the preparations coming from his hands have been medicated with the thirtieth dilution, until he shall have been called upon to do so by this society, and that he will use every means in his power to preserve the purity of the materials entrusted to his care, and to make the test fair and honorable.

That all provers and experimenters be required to send their reports to the secretary, Dr. Albert Schlämilch, before the first day of December, 1879; and that the result be published in full about the first of January, 1880.

And finally, That this society appropriate a sufficient sum of money to defray the expenses of furnishing and delivering the test pellets of Aconite to one hundred provers—these being selected from the first who apply—and that the other provers and experimenters be required to pay in advance to the secretary of the society the sum of thirty cents for each set of test pellets sent them.

Milwaukee, Dec. 3d, 1878.

EUGENE F. STORKE, M. D.,	ALBERT SCHLÄMILCH, M. D.,
ROBERT MARTIN, M. D.,	G. C. McDERMOTT, M. D.,
E. M. ROSENKRANS, M. D.,	O. W. CARLSON, M. D.,
JULIA FORD, M. D.	

THE
PROGRESS OF THE MILWAUKEE TEST.*

REPORT OF THE STANDING COMMITTEE ON THE TEST
TO THE MILWAUKEE ACADEMY OF MEDICINE.

MR. PRESIDENT AND GENTLEMEN: Your Standing Committee on the Milwaukee Test beg to submit the following report on the present condition of that measure, which has now for over six months past engrossed the attention of a large part of the medical profession. The object of the proposition is well known to you, as are also its terms. Both of these have, however, been misrepresented by our opponents, which will be our excuse for recapitulating the main features of the measure.

Two tests are proposed, both of the 30th Hahnemannian attenuation of any remedy in common use which may be applied for. The first is pathogenetic; the second therapeutic; and it was believed that both these tests would cover all objections which might be made. The only qualifications asked for in an experimenter are, that he shall be a believer in the efficacy of the 30th dilution, and familiar with the symptomatology of the remedy he applies for. No conditions are imposed upon him in respect of the manner, or method, or subject he may employ for his experimentation. He may test the remedy on himself or his mother-in-law, on the healthy or the sick, the young or the old, the obtuse or the sensitive to drug-action; and, if he has any practice at all, he will know of some individual who is sensitive to some particular drug. The task is for him to designate which vial contains the medicated pellets.

Naturally the question provoked considerable discussion, and

* Reprinted from the Hahnemannian Monthly, October, 1879.

of those who have shown any interest in the matter we find them ranged on two sides, for and against the proposition. We will quote a few of its many friends:

PROFESSOR T. F. ALLEN, of New York, said, at the American Institute meeting: "It is a step in the right direction."

PROFESSOR CHARLES B. GATCHELL, of Ann Arbor, says, in the *March Observer*: "I regard the proposition as a very fair one. You may add my name to the list," etc.

PROFESSOR J. S. MITCHELL, of Chicago, writes: "I think well of your plan. We should test our remedies fully in every way."

PROFESSOR J. P. DAKE, of Nashville, writes: "Your proposition is fair and the method decidedly scientific."

PROFESSOR ASA S. COUCH, of Fredonia, says: "I am glad that your Academy has moved in the matter of testing the high potencies. Shall hope for good results."

DR. RICHARD HUGHES, of England, writes: "I propose to bring it before the British Homœopathic Society."

DR. H. M. PAINE, of Albany, writes: "A thorough and impartial test. I rejoice in your effort, and I believe you will succeed."

PROFESSOR PEMBERTON DUDLEY, of Philadelphia, says: "The Milwaukee Test furnishes an occasion which ought to be made the most of."

PROFESSOR P. G. VALENTINE, of St. Louis, says: "This seems to us a fair proposition."

DR. H. R. ARNDT, of Grand Rapids, writes: "Command my assistance and services whenever you please."

DR. O. W. SMITH, of New York, writes: "Will aid you in any way that I can in carrying out your plan with determination and completeness."

DR. W. H. WINSLOW, of Pittsburgh, writes: "I am in sympathy with you in the test."

DR. W. F. MORGAN, of Leavenworth, writes: "Your article seems to be candid. I am willing to co-operate."

DR. H. A. FOSTER, of Buffalo, writes: "It is fair, reasonable, and rational."

PROFESSOR A. W. WOODWARD, of Chicago, says: "I will find the medicated vial, I warrant."

DR. G. R. MITCHELL, of Richland Centre, says: "I am heartily glad that the Milwaukee Academy has undertaken the work of testing the efficacy of the 30th."

DR. E. C. MORRILL, of Norwalk, Ohio, says: "I can pick out the medicated vial of Nux every time, and will wager \$100 on it."

The New York State Society at its meeting in February, approved the test by a formal resolution, and appointed a committee of three to co-operate with this Society in carrying it out. Two of the committee, high-potency men, refused to obey the instructions of their Society, and have prevented the issuing of any announcement by the committee, in accordance with the wishes of the State Society. The third member, Dr. Paine, is warmly in favor of the test.

The following physicians, believers in the efficacy of the 30th attenuation, have applied for and received the test-pellets.

PROFESSOR C. B. GATCHELL, Ann Arbor, Mich.	DR. N. A. PENNOYER, Kenosha, Wis.
PROFESSOR A. UHLEMEYER, St. Louis, Mo.	DR. C. R. MUZZEY, Watertown, Wis.
PROFESSOR W. J. HAWKES, Chicago, Ill.	DR. E. C. MORRILL, Norwalk, Ohio.
DR. WILLIAM EGGERT, Indianapolis, Ind.	DR. O. S. CHILDS, Beaver Dam, Wis.
DR. H. L. WALDO, Troy, N. Y.	DR. WILLIAM B. TRITES, Manayunk, Pa.
DR. W. F. MORGAN, Leavenworth, Kan.	DR. M. A. RIES, Milwaukee, Wis.
DR. J. W. THOMPSON, Greenfield, Mass.	DR. G. R. MITCHELL, Richland Centre, Wis.
DR. JOHN H. THOMPSON, New York.	DR. P. NELSON, Minneapolis, Minn.
DR. W. H. BLAKELEY, Bowling Green, Ky.	DR. WILLIAM COLLISON, St. Louis, Mo.
DR. W. S. GILLETT, Fox Lake, Wis.	DR. E. A. L. CAMPBELL, Attleboro, Mass.
DR. C. H. HALL, Madison, Wis.	DR. T. L. BROWN, Binghamton, N. Y.
DR. A. W. WOODWARD, Chicago, Ill.	DR. C. MOHR, Philadelphia, Pa.
DR. O. W. SMITH, Union Springs, N. Y.	DR. W. A. PEARSALL, Saratoga, N. Y.
	DR. W. M. BUTLER, Middletown, N. Y.

The opponents of the test are well represented by the following extracts from the letters and articles of the most prominent among the men who are daily furnishing the oft-quoted "great mass of evidence" for the medicinal efficacy of the high potencies. They are, strange to say, almost unanimous in condemnation of what would seem to be an excellent opportunity for them to prove beyond cavil the claims which they so vehemently urge.

DR. AD. LIPPE, of Philadelphia, calls it "an absurd question" and "a ridiculous test."

DR. C. LIPPE, of New York, says, it "cannot be a scientific test. I feel its absurdity."

PROFESSOR T. S. HOYNE, of Chicago, writes: "No use or necessity of proving what has been proved thousands of times."

PROFESSOR T. P. WILSON, of Cincinnati, calls it "a made-up scheme," and says that it is "not only uncalled for, but bordering upon the ludicrous."

DR. T. F. POMEROY, of Detroit, lets the cat out of the bag, thus: "The advocates of the potential efficacy of the 30th dilutions cannot be caught in any *such trap* as it thus spreads for their feet; nor can they be beguiled or misled by any such *artful dodge* as is proposed through the instrumentality of the Milwaukee Academy of Medicine."

DR. C. E. BLUMENTHAL, of New York, says: "I do not consider the proposed so-called test of any value."

DR. L. E. OBER, of Wisconsin, says: "The proposed plan is just as fallacious as the error you wish to correct."

DR. S. LILIENTHAL, of New York, says: "The test is not fair, because it is not complete; because it differentiates not strict enough."

DR. JOHN C. MORGAN, of Philadelphia, says: "The whole movement [is] a partisan aggression, an effort to brand the whole record of homeopathic practice."

DR. C. H. VON TAGEN, of Chicago, says: "A local medical association is not the proper source for such a movement."

DR. C. PEARSON, of Washington, thinks that the movement is an effort to prove him "either a fool or a rascal, and a death-thrust at homeopathy; one that its vilest enemies have hitherto failed to equal."

DR. SCHULZ, of California, seeing only the pathogenetic test, believes it will fail, and therefore will do homeopathy no good.

DR. GEORGE H. CARR, of Michigan, writes: "The potency is altogether too low. In my every-day practice I use the 100,000th potency, and higher, as high as the 50^{mm} of some drugs. I am too well pleased with their action; too much so to ever 'putter round' with 30ths. When you are ready for a complete test, with *genuine* high potencies, I will be only too happy to accommodate you."

DR. R. B. McCLEARY, of Illinois, writes: "I have been using the high attenuations for years, from the 1st to 85th, with the best of results; and I have no hesitancy in declaring my preference for the high potencies, but decline to enter into an arrangement to test already well-tested remedies."

DR. T. BACMEISTER, of Illinois, says, that "every single principle underlying this test is absolutely false, and the result . . . is of no import."

PROFESSOR SAMUEL A. JONES, of Michigan, writes: "I have no need of such a test. I have no time to spend in or on superfluous work," and with his usual elegance of diction, ascribes it to "the piddling pyrrhonism of beer-brewing Milwaukee."

DR. WILLIAM GALLUPE, of Maine, writes us thirteen pages of "silent contempt," as it rightly deserves.

The journals have nearly all paid their respects to the Test, some by publishing the announcement, others by ridiculing the measure and its defenders, others again by misrepresenting both. The *St. Louis Clinical Review* and the HAHNEMANNIAN MONTHLY have not only indorsed the proposition, but have opened their columns freely for its defence. The Anglo-American *Organon* at first approved the plan, but after its American colleagues sounded the alarm, it joined in abusive misrepresentation. The *Observer* dodged the question by being "out of town," when the pamphlet announcing it arrived. The *Homoeopath* refused to publish the proposition because it had already appeared in print, and has editorially misrepresented it, and opened its columns to the most virulent attacks upon the Test and its defenders.

Much hard work has been done by your committee and the Secretary, Dr. Schloemilch, in writing to physicians, answering inquiries, and defending the Test in the journals. In this they have been aided materially by Dr. Storke, of this Society, and by Dr. Paine, of Albany, New York.

This report would be incomplete if it did not notice certain counter-propositions made to this Academy or to members thereof by gentlemen who do not like the plan adopted. Of these, that of Professor T. F. Allen is the most important, by reason of the prominence of its author, and of the place in which it was announced. Before the American Institute, at its last session, Professor Allen spoke bravely for the high potencies, and indorsed the principle of the Milwaukee Test, but preferred a different arrangement, which was, that Boericke & Tafel

furnish him with one remedy in the 30th potency, selected from a list of six (or ten) remedies which he should name, and he would designate it at the next session of the Institute.

Another plan is by an English chemist, a Mr. Alfred Heath, in the columns of the Anglo-American *Organon*, and is to the effect that this Society should send him three or four thirtieths of certain drugs designated by him, and at the same time deposit with a well-known partisan of the high potencies a sealed description of the same, Mr. Heath thereupon to ascertain by experiment which remedy is contained in each vial. He does not say what he proposes to experiment upon, the sick, or the healthy, or the sealed description in his friend's hands.

A third plan is proposed by [Dr.] M. A. Bronson in the May *Homœopath*. He wants us to order Boericke & Tafel to send him two unmarked vials, one filled with pure alcohol, the other with the 30th of Merc. Sol., and he will, by therapeutic use, ascertain which is the remedy. He forgets that, if his credit is good, Messrs. Boericke & Tafel will send him the vials without our order, and he can experiment therewith to his heart's content. His plan is exactly the same as the therapeutic portion of the Milwaukee Test, divested of any safeguard against error, or self-deception, or leakage of the identity of the material.

A fourth proposition was made by Dr. George H. Carr, of Michigan, in a letter to your Secretary. He says he won't "putter round" with 30ths, but give him genuine high potencies (100,000ths to 50^{mm}), and he will be happy to accommodate us. Dr. Schlemmle wrote, asking him to send on his 100,000th of any drug he had most confidence in, and that we would return it with a similar vial of blanks. No response has since been received, although several months have elapsed.

Another proposition is that of Professor W. J. Hawkes, of Chicago, made at the last meeting of our State society, and since repeated in the *Homœopath*. He will undertake to pick out the 30th as often as we can pick out the 3d (he afterwards raised this to the 6th), and will bet \$100 thereon.

Various other plans have been proposed in general terms. None have been strictly defined, except the foregoing, which are in no wise improvements on our method, as they diminish rather than increase the safeguards surrounding the experiment. Your committee would suggest that so far as this society is concerned the consideration of these proposals be postponed until after the conclusion of the Milwaukee Test. To take up every challenge, to adopt every plan or suggestion received

from persons who dislike the plan which we have adopted, would be to cause confusion, and a lack of uniformity, which could not help the final result, but would tend to weaken its positive character. *One plan at a time* should be our motto, and when we have done with this test we can feel at liberty to enter upon others. An exception, however, might be made in the case of Professor Allen, who, from his position as editor of the great *Encyclopedia of Homoeopathic Materia Medica*, is entitled to every consideration which will aid him in co-operating with us. Your committee, therefore, recommend that your Secretary be requested to communicate with Professor Allen, asking him to state his objections to the method of the Milwaukee Test, if he has any, and to define his proposition in writing, carefully surrounding it with strictly scientific safeguards. When thus stated it will be in better shape for your consideration than in its present form of an oral proposition.

SAMUEL POTTER, M.D.,
LEWIS SHERMAN, M.D.,
E. M. ROSENKRANS, M.D.,

MILWAUKEE, September 2d, 1879.

Committee.

FINAL REPORT

ON THE

MILWAUKEE TEST of the THIRTIETH DILUTION.

The Milwaukee Academy of Medicine, in completing the Pathogenetic and Therapeutic Test of the Thirtieth Hahnemannian Dilution, makes the following report:

That the unavoidable delay in making the report, was due to the removal of the depositary, Rev. G. T. Ladd, from this city, to Brunswick, Maine; to his absence from home, caused by the illness and death of his father; and to the tardiness of the reports from the experimenters.

That in carrying out the provisions of the test, we have adhered strictly to the details of the plan for a scientific test of the pathogenetic and therapeutic action of the thirtieth Hahnemannian dilution; full particulars of which, were published in the circular issued by this society in December, 1878. The *object* of the test and the *modus operandi* were announced as follows:

* * * "The object of this test is to determine whether, or not, this preparation can produce any medicinal action on the human organism, in health or disease.

"A vial of pure sugar pellets, moistened with the thirtieth Hahnemannian dilution of Aconite and nine similar vials, moistened with pure alcohol, so as to make them resemble the test pellets, shall be given to the prover. The vials are to be numbered 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10. The number given to the Aconite vial shall be unknown to the prover, and it shall be his task to determine which of the ten vials contains Aconite.

"These preparations are to be put up with the greatest care, in the presence of the members of the *Milwaukee Academy of Medicine*, and then placed in the hands of an unprejudiced layman of unimpeachable honor, who shall number and dispense the vials as they are called for by the provers.

"The provers must be physicians of acknowledged ability, who possess a good knowledge of the recorded symptomatology of Aconite, and who have faith in the efficacy of the thirtieth dilution.

* * * * *

"Preparations of *Arsenicum album*, *Aurum metallicum*, *Carbo vegetabilis*, *Natrum muriaticum* and *Sulphur* in the thirtieth Hahnemannian dilution, made with the same precautions and care as this of *Aconitum*, shall be used as a test of the *therapeutic* powers of the thirtieth dilutions. In consideration of the inconvenience of experimenting on the sick, arising from popular prejudices, the number of vials of "unmedicated" pellets may be limited to one for each remedy, and the experiments tried mostly in chronic diseases. The real gain to the healing art, which will be accomplished by the establishment of the truth or falsity of the theory of "potentization," will amply compensate for the risk of delaying a few cures.

"The experimenters must be physicians of acknowledged ability, who possess a good knowledge of the therapeutic indications of the remedies tried and who profess faith in the efficacy of the thirtieth dilution." * * *

The committee appointed by the Milwaukee Academy of Medicine, for the purpose of making arrangements to prepare a scientific test of the efficacy of the Thirtieth Hahnemannian Dilution, reported as follows:

MR. PRESIDENT: Your committee have carefully considered the plan proposed in Dr. Lewis Sherman's paper, for testing the efficacy of the thirtieth Hahnemannian dilution, and we are unanimously of the opinion that the test proposed in that paper is fair and honorable, and that the interests of science demand that it should be made.

We recommend,

That our society undertake to carry out the provisions of this test, and that to this end the essential features and the practical details of the test be given for publication as soon as practicable to every regular Homœopathic periodical printed in the English language; and that translations of the same be sent to every known regular Homœopathic periodical printed in foreign languages; and that all other appropriate and accessible means be employed to give the test publicity.

That the directions given by Hahnemann for the preparation of the thirtieth dilution be followed with the most scrupulous exactness: that the alcohol used be of the purest quality obtainable, and that to this end, a quantity of the best so-called "Homœopathic Alcohol" be redistilled in glass for the purposes of this test.

That the Rev. Geo. T. Ladd, of Milwaukee, be selected to number and dispense the vials of test pellets as they are called for by the provers and experimenters; and that he give a solemn pledge that he will not, in any manner, reveal to any person which of the preparations coming from his hands have been medicated with the thirtieth dilution, until he shall have been called upon to do so by this society, and that he will use every means in his power to preserve the purity of the materials entrusted to his care, and to make the test fair and honorable.

That all provers and experimenters be required to send their reports to the secretary, Dr. Albert Schloemilch, before the first day of December, 1879; and that the result be published in full about the first of January, 1880.

And finally, That this society appropriate a sufficient sum of money to defray the expenses of furnishing and delivering the test pellets of Aconite to one hundred provers—these being selected from the first who apply—and that the other provers and experimenters be required to pay in advance to the secretary of the society the sum of thirty cents for each set of test pellets sent them.

Milwaukee, Dec. 3d, 1878.

EUGENE F. STORKE, M.D.,
ROBERT MARTIN, M.D.,
E. M. ROSENKRANS, M.D.,
JULIA FORD, M.D.

ALBERT SCHLOEMILCH, M.D.,
G. C. McDERMOTT, M.D.,
O. W. CARLSON, M.D.

The society unanimously adopted the report, and has used every possible means to give the test publicity.

We would further report,

That the medicines used in making the dilutions for the *therapeutic* test, were obtained from the pharmacy of Messrs. Boericke & Tafel, and the Aconite tincture was tested by several members of this society, and found to produce its pathogenetic effects.

That the dilutions were made by this society, in accordance with the Hahnemannian directions for the preparation of the thirtieth

That at a regular meeting of the society, held April 1, 1879, the following resolution was unanimously adopted:

"Upon application by any Professor in a Medical College, or any other public advocate of the High Potencies, the Academy will prepare and furnish the 30th Hahnemannian Dilution of *any remedy* in common use, for the purpose, and in accordance with the terms, heretofore published in the pamphlet entitled 'A Test of the Thirtieth Dilution.'"

That in accordance with various requests of the provers we have prepared in addition to the dilutions mentioned in the pamphlet, *pathogenetic tests* of *Nux vomica*, *Belladonna* and *Arsenicum album*, and *therapeutic tests* of *Sulphur* and *Digitalis*.

That the bottles containing the thirtieth dilutions, thus prepared, together with a bottle of the alcohol used in their preparation, were given directly into the custody of the depositary. That he was also supplied with pure sugar pellets, vials and mailing boxes, and that he was requested to medicate the pellets, and dispense them according to orders, which he might receive from the secretary.

That the applications for the test cases were given directly to the depositary as soon after their receipt as possible; that all cases given out were sent by him in response to applications received by this society from the provers; and that in answer to our request we received from him a thoroughly sealed envelope, containing the sub-joined report:

BOWDOIN COLLEGE, BRUNSWICK, Me., Jan. 26, 1880.

To the Milwaukee Academy of Medicine—Gentlemen: The report which is herewith submitted to you, I beg leave to preface with the following statements:

The work which you did me the honor to entrust to me, has been most carefully and scrupulously done; the record has been accurately kept, and secluded from all eyes but my own.

Great pains has been taken to exclude entirely the possibility of guessing the medicated vials, instead of discovering them by scientific experiment.

Nothing has been permitted to indicate a difference in the vials tested, or to make it possible for any experimenter to detect in any way the reasons for choosing one number, rather than another, of all the vials numbered to contain the medicated pellets.

So far as the test has been made, it has been made under the fairest conditions possible for me to secure.

With these remarks, I invite your attention to the appended itemized statement of the tests sent, the time of sending, the persons to whom sent, and the numbers in each test of the medicated vials.

These, gentlemen, are all the vials sent out by me in accordance with the instructions received from your committee.

I am, very respectfully yours, *Geo. T. Ludd.*

In the tabular statement, the number of the medicated vial in the cases not tested, or not reported, has been withheld by the society, for obvious reasons. The last column, giving the report of the experimenter, has been added, to make the report complete.

NOTE. Beside the above, an application was received from Dr. Adams, of Toronto, Canada, for *Lyc.*³⁰, in a ten-vial test. The material was prepared at a special meeting of the Academy, and sent by express to Prof. Ludd. Dr. Adams' name not appearing in Prof. Ludd's report, we infer that the package did not reach him, after his removal from this city.

EXPERIMENTS MADE FOR THE PURPOSE OF DETERMINING THE LIMIT OF DRUG PRESENCE AND POWER IN ATTENUATION:—A PORTION OF A PAPER PRESENTED TO THE AMERICAN INSTITUTE OF HOMŒOPATHY, AT MILWAUKEE, WIS., 1880, BY LEWIS SHERMAN, M. D., MEMBER OF THE BUREAU OF MATERIA MEDICA, PHARMACY, AND PROVINGS.

The tests of the 3d, 5th, 6th, 7th, 8th, 9th and 10th decimal dilutions were performed under the direction of the *American Institute of Homœopathy*, 1879-80. The tests of the 30th centesimal dilutions were performed under the direction of the *Milwaukee Academy of Medicine*, 1878-80.

Two, five, or ten, numbered vials were given to the prover. One of the vials contained the remedy to be tested, while the others contained only a portion of the sugar or alcohol used in the preparation of the remedy. The provers undertook to select the medicine from among the blanks, by means of its action on the human body.

All the experiments were protected against the influence of collusion and fraud, by being placed under the immediate, personal supervision of competent physicians representing opposing opinions in regard to the question of dynamization by attenuation.

In the first column is given the name of the experimenter; in the second column, the name of the drug tested; in the third column, the number of "blanks," or vials containing sugar and alcohol only; and in the fourth column the result of the experiment.

TESTS OF THE THIRD DECIMAL DILUTION.

Samuel Potter,	Aconitum,	9 Blanks.	Correct selection.
Lewis Sherman,	Aconitum,	9 "	Correct selection.
Lewis Sherman,	Belladonna No. 1	9 "	Incorrect selection.
Samuel Potter,	Belladonna No. 2	9 "	Correct selection.
Lewis Sherman,	Belladonna No. 2	9 "	Correct selection.

TESTS OF THE FIFTH DECIMAL DILUTION.

Lewis Sherman,	Arsenicum,	9 Blanks.	Correct selection.
Samuel Potter,	Phosphorus,	9 "	Correct selection.
Lewis Sherman,	Phosphorus,	9 "	Correct selection.

TESTS OF THE SIXTH DECIMAL DILUTION.

Samuel Potter,	Aconitum,	9 Blanks.	Correct selection.
Lewis Sherman,	Aconitum,	9 "	Correct selection.
Lewis Sherman,	Arsenicum,	9 "	Correct selection.
Samuel Potter,	Phosphorus,	9 "	Correct selection.
Lewis Sherman,	Phosphorus,	9 "	Correct selection.
Samuel Potter,	Belladonna No. 2	9 "	Correct selection.
Lewis Sherman,	Belladonna No. 2	9 "	Incorrect selection.
G. C. McDermott,	Arsenicum,	9 "	Lost the package.

TESTS OF THE SEVENTH DECIMAL DILUTION.

Samuel Potter,	Arsenicum,	9 Blanks.	Correct selection.
Lewis Sherman,	Belladonna No. 1	9 " "	Incorrect selection.

TESTS OF THE EIGHTH DECIMAL DILUTION.

Samuel Potter,	Phosphorus,	9 Blanks.	Incorrect selection.
Lewis Sherman,	Phosphorus,	9 " "	Correct selection.

TESTS OF THE NINTH DECIMAL DILUTION.

Samuel Potter,	Phosphorus,	9 Blanks.	Correct selection.
Lewis Sherman,	Phosphorus,	9 " "	Incorrect selection.

TESTS OF THE TENTH DECIMAL DILUTION.

Samuel Potter,	Phosphorus,	9 Blanks.	Incorrect selection.
Lewis Sherman,	Phosphorus,	9 " "	Incorrect selection.

TESTS OF THE THIRTIETH CENTESIMAL DILUTION.

W. H. Blakely, Bowling Green, Ky.	Aconitum,	9*	Incorrect selection.
G. R. Mitchell, Richland C'r, Wis.	Aconitum,	9	Incorrect selection.
C. R. Muzzy, Watertown, Wis.	Aconitum,	9	Incorrect selection.
A. W. Woodward, Chicago, Ill.	Aconitum,	9	Incorrect selection.
N. A. Pennoyer, Kenosha, Wis.	Aconitum,	9	Incorrect selection.
M. A. Ries, Milwaukee, Wis.	Aconitum,	9	Incorrect selection.
A. Uhlemeyer, St. Louis, Mo.	Aconitum,	9	Incorrect selection.
J. H. Thompson, New York.	Aconitum,	9	No selection.
W. F. Morgan, Leavenworth, Kan.	Aconitum,	9	No selection.
J. W. Thompson, Greenfield, Mass.	Aconitum,	9	No report.
H. L. Waldo, West Troy, N. Y.	Aconitum,	9	No report.
E. Lippincott, Bowling Green, Ky.	Aconitum,	9	No report.
W. B. Trites, Manayunk, Pa.	Aconitum,	9	No report.
C. H. Hall, Madison, Wis.	Aconitum,	9	No report.
C. H. Hall, Madison, Wis.	Aconitum,	9	No report.
O. W. Smith, Union Springs, N. Y.	Aconitum,	9	No report.
W. Colleson, St. Louis, Mo.	Aconitum,	9	No report.
W. Eggert, Indianapolis, Ind.	Aconitum,	9	No report.
H. A. Foster, Buffalo, N. Y.	Aconitum,	9	No report.
T. L. Brown, Binghampton, N. Y.	Aconitum,	9	No report.
H. A. Foster, Buffalo, N. Y.	Arsenicum,	9	No report.
C. W. Mohr, Philadelphia, Pa.	Belladonna,	9	No report.
J. A. Pearsall, Saratoga, N. Y.	Belladonna,	9	No report.
E. C. Morrill, Norwalk, O.	Nux vomica,	9	No report.
T. M. Martin, Delavan, Wis.	Nux vomica,	9	No report.
N. A. Pennoyer, Kenosha, Wis.	Arsenicum,	4	No report.
W. M. Butler, Middletown, N. Y.	Digitalis,	1	No report.
W. M. Butler, Middletown, N. Y.	Digitalis,	1	No report.
C. B. Gatchell, Ann Arbor, Mich.	Aurum,	1	No report.
C. B. Gatchell, Ann Arbor, Mich.	Arsenicum,	1	No report.
C. B. Gatchell, Ann Arbor, Mich.	Calcaria carb.,	1	No report.
C. B. Gatchell, Ann Arbor, Mich.	Carbo veg.	1	No report.
C. B. Gatchell, Ann Arbor, Mich.	Sulphur,	1	No report.
W. S. Gillett, Fox Lake, Wis.	Arsenicum,	1	No report.

* This column gives the number of "blanks" in each case.

3

ESTIMATE OF THE PROBABILITY OF THE EXISTENCE OF MEDICAL

3x dilution, 2,222 in favor, to 1 against.

000,000,000,000,000,000,000,000,000,000 against.

Or leaving out of the calculation the experimenters who did not report, 1 in favor, to 1,999,999,999 against.

THE LOGICAL BASIS

OF THE

HIGH POTENCY QUESTION.

"Experience is fallacious, and judgment difficult."—HIPPOCRATES, APH. I.

"Curæ, opprobrium medicorum."—FIGULUS.

ABSTRACT OF A PAPER READ BEFORE

THE MILWAUKEE ACADEMY OF MEDICINE,

BY

SAMUEL POTTER, M.D.,

APRIL, 1879.

[REPRINTED FROM THE HAHNEMANNIAN MONTHLY OF JUNE, 1879.]

ADDITIONS AND ERRATA.

Page 11; — Insert the following in the table entitled "Hahnemann's Posological Record."

- | | | |
|------|----|--|
| 1832 | 77 | Mentioned "once having prepared" the 90th of Sulphur, and using it once in one case of "rare epileptic attacks;" not claiming a cure. |
| 1833 | 78 | Said of the 60th, 150th, and 300th, that their action is of shorter duration than that of the 30th, "which is generally sufficient." Prescribed for himself "two olfactions" Coff.30th first, and then Calc. |
| 1838 | 83 | Mentioned the 50th approvingly. |
| 1841 | 86 | Wrote to Dr Lehmann, his pharmacist, for the 3rd triturations of several drugs. |
| 1843 | 88 | Reported two cases to Bonninghausen, in which he mentions having used Bell.30, Hyos.30, Sulph.2, Merc. viv.2, Ac.-nit. (by olfaction of one globule in oz.j of alcohol.) |

Page 13, line 4 from bottom; — for "*never*" read "*scarcely ever*."

Page 22; — Strike out the 2nd foot-note, it being misquoted.

THE LOGICAL BASIS

OF THE

HIGH POTENCY QUESTION.

INTRODUCTORY.—Hippocrates, or some physician contemporary with him, announced the doctrine of similars in medicine twenty-six centuries ago.* Lying almost dormant for two thousand five hundred years, it was revived eighty-three years since (1796) by Dr. Samuel Hahnemann, and at once became known to the world by the persecutions which he and his followers suffered at the hands of medical bigots, who, “dressed in a little brief authority,” scorned the formula, denied the facts, expelled the followers of Hippocrates from the temples bearing his name, only to themselves adopt the principle, reduce the dose, and quietly appropriate the vestments of the priests whom they still term† “quacks” and “false prophets.”

The men who ten years ago sneered with Headland, “Who would prescribe *Strychnia* in tetanus,‡ *Opium* in congestion of the brain, or *irritants* in gastrodynia?” are to-day giving these remedies in these very diseases,§ as well as *Aconite* in synochal fever, *Belladonna* in sore throat, scarlatina, and erysipelas, *Arsenic* in skin diseases and cholera, *Ipecac.* in vomiting, *acids* for acidity and *alkalies* for alkalinity, *Cantharis* for chordee and strangury, etc.; are using the homeopathic *trit-*

* Basil, 1538, frob., page 72, line 35.

† Prof. Bartholow's *Materia Medica*. New York, 1878. Art. “*Aconite*.”

‡ Headland's “On the Action of Medicines,” chapter ii.

§ Bartholow's *Materia Medica*.

ration in preference to the time-honored pill,* carrying the homœopathic vials and cases, dropping a grain of all but inert powder in half a pint of water, and giving a child a teaspoonful hourly.† Yet they term homœopaths “quacks,”‡ scorn the law of similars, blot Hahnemann’s name from their medical history; and even in progressive America have influenced the United States Commissioner of Education to ignore the nine homœopathic colleges, the numerous homœopathic hospitals and asylums, journals and books, and the six thousand homœopathic physicians, when publishing a memoir in our Centennial year on a Century of American Medicine.§

Why this injustice? Its parallel is not to be found elsewhere in scientific history. The rule has ever been the reverse, and converts to a system have never hesitated to lift up its flag, when such action entailed no danger to life and property. It is a fact known to every intelligent layman that the leading men in the dominant school of medicine do not hesitate to acknowledge their use of similars, small doses, and single remedies. Why do they disclaim the source of their inspiration, repudiate the name of homœopath, and call its professors “quacks?” Why do they not acknowledge the errors of their predecessors, as *they* did of *theirs*, and break down the harmless and futile barriers which still stand nominally between them and us? Why, in a word, does the great body of medicine still reject homœopathy?—

Perhaps the cause may be found in our own temple. Have we at its very threshold any fetich which turns away our would-be friends in disgust and dismay? Is there in our system any apple of discord, any debated question, never acknowledged even by a majority of our own school, which threatens our harmony, may be the stumbling-block which bars the progress of our principles towards general adoption, *and without which we would still be homœopathic physicians?*

Such a double-headed idol there is, I believe, whose title, *High Potencies*, conferred in the Duke of Gotha’s stable by the horse-jockey Jenichen, has been the *bête noir* of our scientific minds, and is the fetich which has soiled our banners, the

* H. C. Piffard, M.D., Professor of Dermatology, University School of Medicine, New York.

† Ringer’s Therapeutics. London, 6th edition, page 101.

‡ Prof. Bartholow’s *Materia Medica*. New York, 1878. Art. “Aconite.”

§ Contributions to the History of Medical Education and Medical Institutions in the United States of America. 1776–1876. Washington. Government Printing Office. 1877. Pages 41, 42.

cloud which dims the brightness of our armor. This monster has two faces: one bearing a physical aspect, reflecting as its main thought the exploded Grecian theory of the infinite divisibility of matter: the other, a flickering treacherous semblance, a spiritual phantom, pointing to a new force, an imponderable something, which cannot be felt, or heard, or seen, but, protean-like, is said to arise by mere agitation, with as many definite shapes as there are drugs to rub it against. This is called the "*Dynamization Theory*," and, like an *ignis fatuus*, it leads us into a veritable slough of despond, a quagmire in which we sink surrounded by the whitened bones of spiritualism, mesmerism, Reichenbach's od-force, miracles, transubstantiation, trinities, vampires, elves, demons, witches, harpies, satyrs, and all the shapes, fair and foul, of man's imagination, fear, or superstition; most of which have had their day, though many are still adhered to. These may be all good therapeutical agents of the psychical class; as well as such potent forces as love, joy, fear, hatred, confidence in the doctor, his own self-assertion; and if Jenichen, Fineke, and Swan had but potentized some of them, and we had them in bottles, labelled to order, in this wise, "Self-conceit of Dr. L——, 200th," "Dogmatism of Dr. H——, 30th," "Blackguardism of Professor J——, 1000th," "Mendacity of Dr. G——, em.th," etc., we might be enabled to perform some wondrous cures.

But the second feature may be dismissed from consideration, as it is only an excuse, an explanation for the first, and falls necessarily therewith. For, if we can show that there is no trustworthy evidence for the existence of medicinal power in the "high potencies," it will be superfluous to attack the explanation of how such power is developed.

I propose to state the result of my own examination of this question, following the methods of logical science, without which it were vain to expect correct thought or accurate reasoning.

THE LOGICAL REQUIREMENTS.—Inductive logic, "the foundation of all sciences,"* though dating from the Bacons in the thirteenth and seventeenth centuries, was not supposed by the most eminent logicians to be capable "of being brought into a scientific form,"† or given rules and systematic arrangement. But John Stuart Mill has so systematized the inductive processes, that we, who believe that through Hahnemann's inductions alone can medicine hope for attainment to the posi-

* John Stuart Mill.

† Archbishop Whately.

tion of a deductive science, may, following Mill's rules, rightly observe facts, estimate evidence, and eliminate the fallacies from which arise the chief dangers in conducting a scientific investigation. The chapter wherein he treats of the laws of complex effects, resulting from a plurality of causes,* is of great value to our inquiry, and so important as a means of education to the observer that I must beg of you its careful perusal. After stating the extreme difficulties inherent in the subject, he takes up a proposition very similar to that we have before us, namely: "Is or is not some particular mendicament (mercury, for instance) a remedy for a given disease?" and proceeds to show the respective degree of applicability of each of the three processes; those of (1) direct observation, and (2) pure experiment, alone, being entirely inapplicable by reason of their characteristic defects, and the impossibility of realizing the necessary logical conditions in the plurality of causes existing in the phenomena of life. By exclusion, then, he comes to the third, or the deductive method, which, he says, "remains to us as the main source of the knowledge we possess, or can acquire, respecting the conditions and laws of the more complex phenomena, and consists of three operations: the first, one of *direct induction*; the second, of *ratiocination*; the third, of *verification*, without which, all the results have little other value than that of conjecture."†

With this eminent authority as our guide our proper course is to form a canon of inquiry, to lay down a standard, to which the evidence offered must conform in some degree to be considered logical.

CANON OF INQUIRY AND EVIDENCE.—I would propose to follow the following order:

- (1.) In the present condition of knowledge has the theory the support of probability?
- (2.) The original authorities; are they worthy of implicit and unquestioning confidence?
- (3.) The witnesses to the facts on which the theory is based; have they been in the main careful, competent, disinterested, impartial observers, who have carefully recorded all the attainable evidence, for and against? and is their evidence trustworthy?

In the examination of the last question it will be competent

* Mill's Logic, book iii, chap. x, secs. 6, 7, 8; chap. xi, sec. 1.

† Sec. 3.

to inquire concerning the evidence adduced, whether it shows, in respect to the facts (cures):

(a.) That the remedial preparation used was actually prepared from the drug after which it is named, and truly represents the attenuation (or potency) stated.

(b.) That the disease cured, or assemblage of symptoms alleviated, actually existed, and was not in process of self-limitation, or cure by some previous treatment.

(c.) That all therapeutic agents used in the treatment are carefully described, with their several effects; whether such agents are physical or psychical, material or spiritual; as for instance, mechanical, topical, dietetic, magnetic, emotional agents.

(d.) That duly considering the results obtained from every such agent used, the medicinal preparation for which the cure is claimed, exercised such a marked and predominating influence, that to it alone can be ascribed the remedial effect.

(e.) That the evidence above described is attested by impartial, trustworthy witnesses, who are skilled in the knowledge of disease and all natural laws; trained, careful observers, having had every possible opportunity to ascertain all the facts in the reported case; having shown every reasonable effort to guard against deception; and with no personal interest, other than a love for the truth, in the settlement of the question.

Of course it is not supposed that in private practice it is possible to obtain in every instance, or even in a majority of cases, such perfect evidence as the above canon requires. It is intended to be a standard of comparison, to which the evidence, to be considered logical, must conform more or less. Should any case fulfil all these requirements, it will have furnished all that the logic of induction demands; but still the two remaining steps of Mill's method would have to be applied, namely, Ratiocination and Verification.

The only objection to this canon, of which I can conceive as coming from an honest mind, is the following: "The efficacy of the thirtieth potency stands on the same evidence as the efficacy of the third; if the evidence is insufficient in the former case, why not in the latter; and must you not logically reject the one as well as the other?"

The reply is simple. If the evidence of physical science as to the presence of drug-matter in both attenuations were the same, the scientific probability (Article I. of our Canon) would be as favorable for one as the other. But in the one case our senses, aided by physical tests, enable us to know that there is

present drug-matter limited in quantity, but still measurable medicine. In the other, no such matter can be found by any means which the accumulated knowledge of centuries has placed in our hands; but, on the contrary, the application of the molecular theory, the basis of present science, affirms that no such matter is present, it having been atomized in the tenth or eleventh dilution. In all matters of *primâ facie* improbability, it is our duty to demand the highest degree of evidence attainable, the most careful observation, as much disinterestedness as possible on the part of the witnesses, corroborative testimony, and, above all, the *negative* as well as the positive side of the case.

An illustration will show this more clearly. Suppose that a competent physician asserts that three hours before he had swallowed fifteen minims of Tinct. aconiti rad. without experiencing any of the known pathogenetic effects of Aconite. We should not doubt him, simply because such an experience is not improbable. But, suppose the same witness states that he had swallowed the same quantity of anhydrous Hydrocyanic acid without experiencing any unusual symptoms. To our minds his evidence, though just the same as in the first instance, would wear a very different aspect. The improbability of the fact stated would color every assertion, and the most searching examination would be insisted upon ere we gave in our adherence to the truth of his statement. The degree of probability which a stated fact presents to a certain mind, always determines for that mind the degree and amount of evidence necessary for the establishment of the so-called fact. Hence we will proceed to examine into the *probability* of the existence of medicinal power in, say the thirtieth attenuation, before looking at the evidence presented in its favor.

ITS SCIENTIFIC PROBABILITY.—At this point the advocates of this “fact” usually trot out their subsidiary hypothesis, the dynamization theory, in explanation of how the power is developed. We might, by examination, see that this theory rests wholly on barefaced assumptions, more difficult of demonstration than Euclid’s postulates, or the first law of motion. I might show you that it is opposed to all known laws of natural or mental phenomena, is inconsistent with itself, and violates every principle of reason;—but I forbear, inasmuch as it is wholly dependent on the question of the existence of the power, and must remain in the shade until the latter is established.

The high-potency men say, that because matter is declared by science to consist of infinitely minute particles, it is not

a grain of Sodium, about the quantity in a grain of the 5th dilution. The theory of molecular magnitudes takes us higher, but stops at the 11th dilution; beyond which it declares that the *probability is against* the existence of drug-matter, and, consequently, of drug-power.

THE AUTHORITY.—We next come to the authority for the theory. Who were the persons responsible for it? What light can be thrown upon their environment which may help us to intelligently estimate their value as witnesses? and do they merit our implicit confidence, our unqualified contempt, or our kind commiseration? This part of the inquiry needs no other excuse than the saying of Locke: “’Tis not worth while to be concerned what he says or thinks, who says or thinks only as he is directed by another.”

Dr. Dudgeon, in his *Lectures on the Theory and Practice of Homeopathy* (London, 1853), states that when Samuel Hahnemann renounced the formula of similars as the guiding law of therapeutics he was about forty years of age, and his prescribed doses* were those in ordinary use, which he continued to use until 1798. One year after (1799), without any reason given for the sudden change, we find him prescribing the one-millionth of a grain. The only sidelights we can throw on this rapid descent are (1), the fact that it was contemporaneous with his expulsion from Königs-lutter, at the instance of the persecuting apothecaries; and (2), his own exultant hope, as he advanced higher, that he would “soon be able to dispense with the apothecaries altogether.” From 1800 to the announcement of the psora theory, twenty-seven years, Hahnemann had no standard of posology, as will be seen from the following table:

* Grains x of Arnica root daily to children of 4 years of age; grains iij of Veratrum album daily in asthma; grains x of Ledum pal. to a child 6 years old; grains iv once a day in Colicodynia; grains v of Ipecac.; grains iv twice a day of Nux vomica; grain $\frac{1}{4}$ of Sulphate of copper, etc. (Dudgeon, op. cit., page 393.)

HAHNEMANN'S PSYCHOLOGICAL RECORD. (CONDENSED FROM DUDGEON.)

Year.	Age.	EVENTS.	DAILY DOSES.	φ	1st.	2d.	3d.	6th.	9th.	12th.	15th.	16th.	18th.	24th.	30th.
1796	41	Doctrine of Similia announced.	Arn., to children, grs. iv-xiv. Lectum, to children, grs. x. Ver. alb., grs. iii-iv. Nux vom., grs. viij. Opium, gr. ½. Camph., grs. xxx-xl. Cinchona, 5½-5i.												
1797															
1798	43														
1799	44	Driven from Königsbutter by the apothecaries.....													
1808	53														
1814	59														
1815	60														
1819	64														
1821	66	Driven from Leipsic by the apothecaries.....													
1825	70	First "potential" expression.													
1827	72	Psora theory announced.....	Camph., gr. ⅙.												
1828	73	Fixed on the 30th as the proper potency for all remedies, saying "It must stop somewhere, it cannot go on to infinity."													
1835	80	Married his second wife and removed to Paris.													
1840	86	Recommended Thuja 60th, Sulph. 2, Merc. 2.													
1843	89	Death. Pocket case contained remedies from 3d to 30th.													
1851		Statue erected in Leipsic.													

In his old age he fixed on the 30th as the appropriate dilution for every remedy, whereby, he says, "all homœopaths will have the same tools to work with;" but his then "high" posology did not receive the unanimous approval of his contemporaries, as the following arrangement will make manifest:

POSOLOGY.

ADOPTED HAHNEMANN'S POSOLOGY.	OPPOSED AND DENOUNCED IT.	HUNG BETWEEN.
<i>Ægidi</i> (afterwards opposed it). <i>Gross</i> —went up and down with every new moon, cured congestions with pellets infected with "blood-power" from his own blood, and had many other delusions. <i>Kammerer</i> , theoretically, says he uses nothing above 6th. <i>Hering</i> advocated isopathy, Jenichenism, curing of bug-bites by a bug potentized to the 30th, eradication of lice by giving to them a dose of louse 30th, etc. <i>Mure</i> , author of deerskin provings, proved lice, potato-rot. <i>Cruzent</i> , author of the "day-theory" of dose, give the 100th if the disease has lasted 100 days, 200th if 200, etc. <i>Nunez</i> condemned all below the 2000th. <i>Stens</i> . <i>Atomyr</i> .	<i>Ægidi</i> . <i>Hartlaub</i> . <i>Gross</i> . <i>Wolf</i> . <i>Werber</i> . <i>Rummel</i> . <i>Griesselich</i> . <i>Kurtz</i> . <i>Veith</i> . <i>Schmid</i> . <i>Schrön</i> . <i>Elwert</i> . <i>Helbig</i> . <i>Vehsemeyer</i> . <i>Lietzan</i> . <i>Schneider</i> . <i>Müller</i> . <i>Arnold</i> . <i>Watzke</i> . <i>Hartmann</i> . And all the English homœopaths.	<i>Rau</i> . <i>Stapp</i> . <i>Watzke</i> (Nat.mur.,high.) <i>Schüler</i> . (6-12.) <i>Noack</i> . <i>Gaillon</i> . <i>Whale</i> . (6-18.) <i>Kampfer</i> . (Grs.—30th.) <i>Koch</i> . <i>Scott</i> . <i>Trinks</i> . (Practiced very low.)

It will be instructive to examine some of the views held by the principal advocates of Hahnemann's 30th in these early years of homœopathy.

Kammerer, *Gross*, and *Hering*, were all isopaths as well as Hahnemannians; Dr. *Hering* being the introducer of this heresy into our school, and *Gross* considering it superior to homœopathy. *Hering* urged the potentization of the faeces of cholera patients, the black vomit of yellow fever, the desquamated skin of scarlatina maligna as remedies for the cure of these diseases; states that a bug potentized to the 30th will cure bug-bites, and that lice and nettles may easily be eradicated from a home by administering to them, respectively, potentized lice and nettle-seeds in the 30th. Dr. *Gross* states as a "fact," that he moistened a globule with his own blood, which was then placed in a vial with 10,000 other globules, and shaken for a quarter of an hour. One of these he placed with 10,000 fresh globules, shaking for an equal time, and with a single dose of this preparation he cured many severe cases of congestion and hæmoptysis. Dr. *Mure* proved the triturated skin

of a deer with the hair on, the skin of the dolphin, a diseased potato, a louse, guano, and many other substances of which the exact nature is unknown. *Dr. Nunez* condemned everything below the 2000th; and *Dr. Cruveilhier* formulated a rule for the dosage, which has one merit, that of easy remembrance. For every day that the disease has lasted he goes up one degree of potency. For example: ψ is the appropriate strength for a disease less than a day old; the 1st, if it has existed one day; the 100th, if a hundred; if a year, the 365th, and so on *ad libitum*.*

We must now follow Hahnemann up the dynamization ladder. We have seen that his first infinitesimal was used in 1799; two years after he published the first germs of the dynamization theory, only germs, however, as he then relied wholly on the supposed number of points of contact which the attenuated medicine presented to the living fibre, and up to 1810 he always employed the expressions "diminution," "subdivision," "attenuation." His *first potential* utterance is found in an essay dated 1825, contemporaneous with his earliest employment of the 30th and with the seventieth year of his age. After this date he ran up pretty fast, forbidding the carrying of medicines in a liquid state for fear of the dreadful energy which the continued motion would excite in them; varying in the number of succussions permitted, between two and fifty; vouching for the power of a globule of the 30th twenty years old, which had been used by olfaction thousands of times, and claiming that smelling at the 30th was the best way of administering a drug. He began to be somewhat contradictory of himself as he mounted the dizzy height; for instance, he asserts that a grain of soda in an ounce of water, shaken for half an hour, became equal in potency to the 30th, yet, on the other hand, that dilution is essential to the potentizing effect. He rested the whole theory and practice on the necessity for weaker drugs, the lower potencies being too powerful, yet he claimed a vast increase of medicinal power (dynamis) from the process of attenuation and succussion. But withal, he never went higher than the 30th in his practice, and, as we have seen, he expressed his belief† that "the thing must end somewhere, it cannot go on to infinity."

The real inventor of the highest potencies was not a physi-

* Dudgeon, op. cit., is my authority for the above. In his book will be found the references to each writer's utterances.

† Letter to Dr. Schreter.

cian by occupation or education, but only a Sarmatian count, Korsakoff, who ran drugs up to the 1500th by what he called the "infecting" process.. He placed a globule of the 100th in a vial containing one thousand pellets, and shook until they were all "infected."

But a horse jockey* in the stable of the Duke of Gotha, *Jenichen* by name, not Samuel Hahnemann, is the genius to whom we must do reverence, if the high potencies are to be accepted. We do not know much about his process, as, being a charlatan of the first water, he kept it a profound secret, and Dr. Hering, who fell heir to it, has continued to keep the light under a bushel. All we know is that, by his own statement, main strength was his potentizer, for he did not attenuate from his starting-point, but proceeded upward by shakes, ten being equal to one degree of potency, his highest, the 60^m, requiring six hundred thousand shakes. Counting five thousand shakes to the hour, and supposing that he could shake for five hours a day, this would require one hundred and twenty hours or twenty-four days of solid shaking for each drug potentized. *Jenichen* began and ended at the same point, Plumbum;† his first potentizing having been of that metal and his last, also, for a ball from his pistol ended his life, and rid the world of either a fool or a knave.

Benninghausen, who, like Korsakoff and *Jenichen*, had received no medical education, *Drs. Gross, Stapf, Rummel, Jahr* and *Hering* followed in the *stahlmeister's* footsteps, all expressing great fear of the possible energy which would be liberated by too much shaking. *Hering*, according to *Dudgeon*, was especially mystical in his ideas, naming the new force of nature "Hahnemannism" (like galvanism, mesmerism, etc.), asserting that one globule of the 30th "infected" the whole air of a room, and that the atmosphere itself, if present in the right proportion, would become a new and powerful potency. *Tietze* believed the force to be electrical. *Rummel* saw the atoms of the 200th potency chasing each other over the slide of a microscope.‡ *Mayrhofer* saw metallic particles of tin in the 14th, although no lenses have been constructed capable of resolving Nobert's twentieth band, the

* See *Dudgeon's Lectures*, page 353, for a discussion as to the social and professional position of the charlatan whom the self-styled "Hahnemannians" delight to honor.

† *Dudgeon*, page 355.

‡ Air-bubbles in the evaporating alcohol.

lines in which are from $\frac{1}{240000}$ to $\frac{1}{300000}$ of an inch apart. Summarizing, the "authorities" stand thus:

DYNAMIZATION THEORY.

ADOPTED BY.	OPPOSED AND DENOUNCED BY.
<p><i>Korsakoff</i>, a Sarmatian count, "infected" up to the 1500th by mere juxtaposition of a medicated pellet, and shaking.</p> <p><i>Jenichen</i>, a horse-jockey, shook ten times for each degree; went to the 60,000th, requiring 600,000 shakes for each drug; kept his method secret, and finally shot himself.</p> <p><i>Baenninghausen</i> had no medical education.</p> <p><i>Gross</i> (see above), <i>Stajf</i>, <i>Rummel</i>, <i>Jahr</i>, <i>Hering</i>, <i>Jostin</i>.</p> <p><i>Tietze</i> believed the power to be electrical, and the same in every drug. (Rummel changed over.)</p> <p><i>Schaubert</i> went back to Zoroaster for his evidence.</p>	<p><i>Egidi</i>.</p> <p><i>Rummel</i>.</p> <p><i>Griesselich</i>.</p> <p><i>Schroen</i>.</p> <p><i>Kretschmar</i>.</p> <p><i>Werber</i>.</p> <p><i>Wolf</i>.</p> <p><i>Fielitz</i>.</p> <p><i>Schmid</i>.</p> <p><i>Lietzan</i>.</p> <p><i>Kamper</i>.</p> <p><i>Strecker</i>.</p> <p><i>Schneider</i>.</p> <p><i>Hartmann</i>.</p> <p><i>Vieth</i>.</p> <p><i>Trunks</i>.</p> <p>All the English homeopaths.</p>

In our own times we have the extension of the Jenichen delusion by the "fluxion process" of *Fincke* and *Swan*, who profess, by a method, which they too kept secret as long as possible, to make a 1,000,000th in less time than Jenichen required for a 10th. They also revive the heathen myth, and claim to have potentized THE SUN. *Dr. Rhees*, in the November (1878) *Investigator* throws some light on the source of the power said to be in Swan's mms., which the doctor believes (and strange to say states his reasons for the belief) to be actually lower than Hahnemann's 3d.

To sum up the authorities, we find that of the men of any note among Hahnemann's contemporaneous followers, less than a score approved this theory, of whom the three most active and consistent were not physicians in any sense of the term; two were adherents only in theory; two more recanted; another changed his views on the subject at every new moon; another found his support in ages beyond the domain of history; three more were mere laughing-stocks for the profession; and the American member of the firm is found dealing in all sorts of contraband wares, among which spiritualism, Jenichenism and isopathy are not the least prominent.

The authority then rests wholly on *Hahnemann*, and as tenderly as possible, but still honestly, we must look closely at him who has fathered such a vigorous bantling.

I am conscious that any conclusions which impeach the infallibility of this great man will be considered treason, im-

piety, the sin of sins, by that class of homeopaths who reverently apply to him the Saviour's appellation, and worship every rag of theory or fanciful speculation which in the most remote manner may be traced to his brain. There are two classes of physicians to whom I do not address myself, namely, the extremists on each side. Those who believe that because Samuel Hahnemann rediscovered a neglected natural law, every thought of his mind must be as true as his first great formula; and those who, on the other hand, finding some of his speculations absurd, and many of his assumptions false, would equally condemn the whole of his life-work, are so enslaved by their prejudices that they cannot listen to reason. The audience I would appeal to consists of the men who can reverse what is worthy of reverence, and condemn what is deserving of condemnation; who, full of admiration for Hahnemann's indomitable energy, tireless application, and brilliant mind, yet do not esteem him as an inspired, infallible god of medicine; these I would urge to carefully ponder over his life, works, character, habits of thought and expression, ere they join hands with those who would have them implicitly follow his dictum, think as he thought, and speak as he spake on this weighty subject.

We have seen that he was often inconsistent in his theories and statements; if we study his private character, we shall find him to have been enslaved by graver faults, especially as age laid its heavy hand upon him. Profoundly impressed in his youth with the uncertainty of the medicine of his day, of which he saw only its worst features, in middle life he stumbled upon a forgotten method, which could elevate it to the position of a science. Completely devoted to this one idea, he consecrated his life to its development, and henceforth lived and breathed only for homeopathy, which he sought to establish as the foundation of pathology, psychology, ethics, physics, and metaphysics, as well as of therapeutics. Powerful opposition, the vilest abuse, and the most bitter persecution, bringing exile and poverty, only made him more devoted to his gods.

"Untamed his pride, unchecked his course,
From foes and wounds he gathers force."

The natural result is seen in his bigoted intolerance, permitting no discussion of his views, brooking no shade of variation from his precepts. He said, "He who does not walk on exactly the same line with me, who diverges, if it be but the breadth of a straw, to the right or to the left, is an apostate and a

traitor, and with him I will have nothing to do." In his devotion to his system he ignored even the emotions of our common nature, and never forgave one of his most active disciples for saying in the sorrow of a bereaved father, that homœopathy could not cure every ill. Such a spirit was scarcely capable of forming an unbiassed judgment, had it no other failing to still more detract from its judicial quality.

His habit of dogmatic assumption forms even a worse feature of his character. Boldly and blindly he lays down assertion after assertion without the slightest attempt at proof. A few examples from the *Organon* will suffice to prove this. We are told in § 11, that "in sickness the vital force is alone primarily deranged;" that "diseases are produced only by the morbidly disturbed vital force;" (§ 12) "that spiritual power is hid in the inner nature of medicines," and that "homœopathic dynamizations are real awakenings" of this power. And so all the way through his writings, though he never exceeds the following example, which, for pure assumption, is quite a gem: "I dissolved," he says, "a grain of soda in an ounce of water mixed with alcohol in a vial, which was thereby filled two-thirds full, and shook this solution continuously for half an hour, and *this was* in dynamization and energy *equal* to the *thirtieth development of power.*"

In one respect his most devoted worshippers cannot but agree that he is wholly incorrect, namely, in his pathology. He classes as "similar" measles and whooping-cough; but as "*dissimilar*," measles and small-pox, which are so similar as to have been for ages looked upon as varieties of the same disease. His psora doctrine of chronic diseases, which cost him, he says, twelve years of continued thought and research, has never been accepted by any respectable number of his followers.

As he grew older his failings grew stronger, and upon the simple base, on which his system began, he piled mountain upon hill, Pelion upon Ossa, of assertions, speculations, and absurdities, until the wonder remains how homœopathy has ever staggered along under the load. Sharp quotes Goethe concerning the Germans, that they "have the gift of rendering the sciences inaccessible," and says, "Certainly Hahnemann possessed the art of making homœopathy unacceptable." Yet the system has made extraordinary progress, and if it could but unload the delusions which poor human nature has imposed on it, and ignorant credulity has chug to, it might be acknowledged as *the science* of medicine.

Hahnemann is not alone in the history of reformers as possessed by absurd aberrations of thought, hallucinations of mental vision. Mahomet, Buddha, Luther, in the religious field, are examples in point; and none better can be found in the scientific world than the illustrious Kepler, that mystic astrologer, whose many vain speculations are forgotten, while his three great laws form the basis of the present science of astronomy. His convictions that the earth was an animal, that the sun, stars, and planets were typical of the Trinity, that a force existed in the sun which impelled all bodies around him, and many other equally absurd ideas, do not, however, injure the value of the truths we owe to him, or of the discoveries he made in astronomy, optics, physics, and geometry. So with the theories and speculations which emanated from the brain of the equally great Hahnemann. If some turn out to be but "chaff, which the wind catcheth and driveth away," the value of the wheat remaining is not lessened. We, who pay due homage only to his great name, should not be surprised to find some of his views to be untenable; were it otherwise, he would not have been a man; he must have been a god!

THE WITNESSES AND THE EVIDENCE.—If the authority fail us, we have yet the "mass of evidence," which we are told has been accumulating from year to year for the potential efficacy of the preparations in question. In the examination of this evidence I must beg my hearers to keep in mind the features of the standard we adopted at the commencement of this inquiry. The most important of the requirements there laid down are those relating to the qualifications of our witnesses. You will agree with me that, if these can be successfully impeached, their evidence will have but little value.

A bitterly partisan witness before a jury on a question of fact carries no conviction with his evidence; and an incompetent, careless lawyer can bring no arguments, no precedents, which will change a previously formed opinion in the mind of a judge. But in any case of disease we have questions both of fact and of reason; matters requiring the most profound knowledge, the most accurate habits, the most highly trained senses, for even their proper observation; and there are necessary a strictly impartial mind, a ripe and educated judgment, carefully trained in correct methods, to properly examine and arrange the facts, or to arrive at a correct induction. Yet in every journal, at every society meeting, we are confronted by

witnesses to these wonderful cures by high potencies, who, often to our personal knowledge, are incapable of observing their own faces in a glass, and of reporting the changes seen on that familiar prospect. Perhaps such a witness has graduated at a medical college after the maximum term of ten months' lectures, having had at his matriculation therein as much education or mental training as can be picked up by the average American boy on the farm, in a store, or on the streets, whence so many of our students come. While in college he has seen on an average one fresh case of disease or injury every day, making 300 in all; of which 200 were venereal and surgical, 50 were phthisical or malarial, according to the climate, and the remainder simple febrile conditions. The only *Materia Medica* he found time for has been, perhaps, a pack of cards, from which he memorized thousands of bewildering symptoms; an assemblage of phantoms, like the shifting sands of the pathless desert, or the countless forms in ocean's bosom, forming myriad combinations to the tortured mind; phantasmagoria of inexpressible difficulty; pictures which, like faces, are never repeated. These numberless effects have been produced, he is told, by *cs*, *3ds*, *12ths*, *30ths*, etc.; but mark, no differentiation is made between those resulting from the crude drug or from its decillionth attenuation. Probably a characteristic symptom is impressed on his mind by a beastly picture, which for pure filth might vie with the productions which the law excludes from the mails. He is constantly impressed with the personal infallibility of "THE MASTER," taught to regard every word which Hahnemann ever penned as inspired, and every presumptuous doubter thereof as an enemy in disguise, a greater foe than the allopath, and the principal obstacle to the progress of "pure homeopathy." He crams enough during the ten months' lectures to squeeze through his solitary examination of seventy or eighty selected questions; after which, if he has the necessary money, he is clothed with sheepskin, and entitled Doctor of Medicine, Surgery, and Obstetrics; Master of Chemistry, Botany, Anatomy, Physiology, and the Laws of Health and Disease. Is such a man likely to prove a disinterested, careful, skillful observer; such a witness as we would trust to for the collection of important evidence on any question lying near to our interests or dear to our hearts?

But his patient approaches! Her story is soon told; her tongue glanced at, pulse felt; a few such questions are asked as, whether she sweats on the side she lies on, feels a stone in her

heart, or coughs at 4 o'clock in the morning. The doctor's vision is directed into vacaney; before his mind the shadowy hosts of symptoms pass and repass in rapid review. A dim spectre arises from among their indefinite shapes. Slowly he advances, his attitude is listless, dejected; his limbs tremble; his fæces are slender, long, dry, tough, and hard, like a dog's. It is the *similimum*! His name is Phosphorus! Back into chaos sinks the spectre, the doctor turns to his desk. From a vial of pellets which rival in size the minute mustard seed of the Saviour's parable, he carefully selects *one*, perhaps a Fincke mm. which he places gently on the patient's tongue, gives her a vial of blanks wherewith to amuse herself, and passes to the next case and the next *similimum*. Perhaps he has given her careful directions about her food, clothing, habits, ordered a series of baths, or the stoppage of some confirmed practice, or profoundly impressed her with the conviction that he has cured hundreds of just such cases as hers,—concerning all of which he makes no mention in his report of the case, or at best a mere hint at what he terms “adjuvants” to the potency. In a week's time, during which he has seen her perhaps once, the patient is better; having had herself rubbed, taken some domestic catnip, or had a good hearty laugh, of which the doctor knows nothing. Another minute pellet moistened with the properties without the presence of Phos., which was oxidized long before it reached his hands; the usual pious fraud Sac. lac., and at the next society meeting, or in the next journal, we are confronted with another proof (!) of the wondrous efficacy of the high potencies; and abused as only physicians can abuse, if we dare to question the reported cure.

The evidence will probably be presented in something like one of the following forms:

(1.) “One case of ague, in an elderly gentleman of fourscore and upwards (after partial suppression by Quinine), was removed by *Lycopod.*²⁰⁰⁰, one dose. It was of the seven-day sort, “*intermittens septiana*,” and had been a source of annoyance for four or five weeks previous. There were no very prominent indications, but the few constitutional symptoms pointed more strongly to this than to any other remedy.”—J. E. W.

(2.) “Mrs. Blank lost all children soon after birth. Had ozaena for a year; under allopathic treatment had grown steadily worse; involved upper lip, which was swollen to three times its normal size, and honeycombed with ulcers. Nitric acid²⁰⁰, one dose, cured in two months.”—T. C. D.

(3.) "Was called to see a child, four years old, sick with dysentery, very frequent discharges, small, bloody and slimy, great pain, constant crying and rolling in bed, had been under "old-school" treatment three weeks; gave Mere. cor.²⁰⁰. Twenty-four hours later was so much better it took no more medicine, and was soon well."—A. M. C.

(4.) "Another child, aged about four years, had been sick with dysentery, under old-school treatment five weeks, now getting worse. Pod. was indicated, and the 200th cured in three days."—A. M. C.

(5.) "Girl, aged twelve, had been sick three days with diphtheria. At eight P.M. throat swelling fast, great difficulty in swallowing. *Crotalus hor.*²⁰⁰, two doses one-half hour apart, relieved at once; slept well, and was bright in the morning and the family happy."—A. M. C.

One might suppose that the above were cases carefully picked out from among thousands of others more carefully reported. But not so: they are all from a single issue of the *Investigator* (the 206th), and in the same number will be found under Professor Hoyne's caption, "Kali Carbonicum," over a dozen other cases with the same characteristic features. Not that all the evidence is of this kind, but the great mass of it is, the carefully reported cases being few in number. With the rivalry between journals, nine or ten struggling for existence where two would amply supply the demand, all kinds of such trash as the above find ready admittance to their columns, and in after years form part of the "great mass of evidence" we hear so much about from the high potency advocates.

The principal objection to such evidence as the basis of a logical induction is its one-sidedness, being all affirmative, none negative. Never does an observer come forward, like the true scientist, with his table of successes and failures, by which a scientific comparison might be made. They are all successes, all cures, and of these, if they had any logical value, we have more than enough. But it may be safely maintained that this very superfluity of affirmation defeats its own ends. It proves too much. It carries with it the necessity of believing an impossibility, namely, that all the witnesses were absolutely infallible in diagnosis and treatment, having always administered just the right remedy. If not, there must have been failures. If failures, how many? In what proportion do they stand to the successes? These are natural

and proper questions, but we have no means of solving them; the failures are not recorded.

As to the logical value of such records of cures, we shall find, if we compare them with our standard of evidence, that they are utterly worthless. They simply prove that certain effects followed the administration of certain preparations, but not that the effects were caused by the preparations in question. Their logical use as proofs of drug-efficacy is exactly parallel to the case of a man who should buy an annual ticket, use it every year for a journey to Europe, be always seasick on the trip, and then ascribe the sea-sickness to the ticket. They offer no evidence as to the genuineness of the preparation used;* none, except mere assertion, that the disease existed or was not in process of self-limitation or cure by other agents. No credit is given to the many other means, physical or psychical, material or immaterial (dynamic), which were undoubtedly used, as we know them to be in all cases of professional treatment. No indications, or at most a hint at them, for the selection of the remedy or for the use of a certain potency. Some of the observers cure as well with the 30th, as do others with the 200th, or others still with the 1000th. No rule has ever yet been formulated by any body of men for the selection of the potency, yet we are asked to place this indefinite treatment alongside of the exact rule "*similia similibus curentur*." No reasons are given for ascribing the cure, as is almost always done, solely to the medicinal preparation employed, to the exclusion of all other possible agencies. No information is offered regarding the ability or impartiality of the observer, other than we may find in the language used or the tone employed, and worse than all, no word is said concerning the previous experience of the observer with the same drug in the same complaint, if he ever had any. These are the objections I would offer to the use of such evidence to establish a logical induction, and when I add to them the almost universally patent partisan feeling evinced by the witnesses in their daily utterances and their journalistic attempts,† I feel assured that

* They do not even agree as to the proportion of drug to medium in a certain "potency," nor as to the use or meaning of the terms "dilution," "potency," "attenuation." See the Investigator for 1878, for an animated discussion of these matters by some prominent physicians, some of them professors in colleges.

† A writer in the Investigator of November 1st, 1877, is so completely potentized as to have lost all faith in "The Master," who, because he advocated the medium attenuations, "forever tarnished," says this Hahnemannian, "and paled the glowing brilliancy of a genius."

no truth-loving physician will permit it to influence his treatment of disease or his efforts for the preservation of health.

The logical value of reported cures, unless the strictest possible requirements* are complied with in their observation and recording, is simply nothing. Even when every possible care is taken to eliminate every factor of error, the results are far from encouraging. Cures of disease are on record from all time, and are established on the same evidence as that on which history itself is built. Since the day when Moses is said to have healed the serpent-bitten Israelites isopathically, to that in which Dr. D'Unger cures another form of "snakes," the best class of evidence is attainable for cures of every disease by every method that human ingenuity or rascality can devise. Witness the history of the Weapon Ointment, the Tar-water mania of Bishop Berkeley, the Metallic Tractors, the King's Touch for scrofula or "king's evil." There is no fact in science or history better established *by evidence*, than are the cures of disease by the touch of a king's hand. The Privy Council of the kingdom appointed the day for the miracle, which was announced in all the churches of the realm. Bishops stood around the king, whose household surgeon introduced such as were really afflicted into the presence. A regular service was used on the occasion, which is still to be seen in old prayer-books of the Church of England. The most eminent surgeons of the day acknowledged the efficacy of the touch. Popish or Jacobite bigots, bitter as they were, never denied but steadily affirmed that Protestant kings were thus gifted. Charles the Second touched nearly one hundred thousand persons. King James touched eight hundred on one occasion in Chester Cathedral. William of Orange could only be prevailed on to do so once, saying, as he laid his hand on the patient, "God give you better health and more sense," and the abuse he received from all ranks of society for what was considered a cruel and impious course, is ample proof of the firm hold which, as a question of fact, the superstition had upon the public mind.† Yet with the Tractors, the Tar-water and the Weapon Ointment, it has had its day, and now who can be found to acknowledge his belief in it?

* Such as the methods adopted by the English physicians to ascertain the truth of the claim made concerning the abstinence from all food of the fasting girl, Sarah Jacobs. See Hammond on Fasting Girls, New York, Putnam, 1879.

† See Macaulay, Hist. Eng., chap. xiv; and Macbeth, act iv, scene iii.

THE VERIFICATION.—Having found the scientific probability adverse, the authority untrustworthy, the evidence valueless, and the witnesses mainly biassed and incompetent, there is but one other logical method whereby to still further pursue this investigation, namely, that of verification by experiment—the third step in Mill's deductive method. It is evident that this might be done by using the “high potencies” ourselves upon the sick, and observing the results; and this is the never-failing exhortation of the believers. The objections to this manner of testing have been so often stated that I will but mention the two of greatest logical force, namely, (1) the operation of the law of mental expectancy on the minds of the observers, and (2) the impossibility of controlling the environment of patients in private practice, so as to secure the necessary logical conditions.

A method, however, has been proposed, which is open to none of these objections, and which must give results according to the existence or non-existence of the medicinal power in question. The Milwaukee test, proposed by Dr. Lewis Sherman, and published by the Milwaukee Academy of Medicine, is an *experimentum crucis* which seems to fill every logical requirement. There can be no doubt about the preparations, they being prepared in the presence of the whole society from the purest materials attainable, and then placed in the hands of a layman, who is wholly free from partisanship on this question, and whose personal and professional standing are so high in his vicinage, and in the country at large, that no doubt can rest on his honesty. From him alone the packages pass to the experimenters, he numbering them, and recording the numbers of the medicated vials in every instance. That there may be no question about the ability of the experimenters for the work, they are sought for only among high-potency men, and thereby the door is shut against any charge of cookery or conspiracy. The experimenters being ignorant from which vial to expect the drug-results, can only select the right one by virtue of the drug-power therein contained, if there be such; and we are wholly secured against any false results save only those arising from chance, which the theory of probabilities will eliminate.

The high-potency men have everything to gain and nothing to lose by this experiment *if their theory and facts are true*. The proposition is thoroughly scientific in spirit, and equally logical in arrangement. It can only fail by the refusal of those who profess to believe in the power to aid in its estab-

lishment. But may not this refusal, if general, be an equally potent factor in the decision of the question?

If the believers are satisfied themselves with the evidence, is it any reason why they should decline to assist in satisfying others, to whom the evidence is not so conclusive; or to aid in establishing the theory as a *scientifically verified induction*? Yet such has been the reply of more than one professor of materia medica in a homœopathic medical college to the invitation to join in the test. What would be thought of a teacher of physics, who, when asserting the existence of electrical force, should decline to demonstrate it experimentally to a skeptical member of his class, though offered the battery and acid needed, with the excuse, "it has been proved, it is not necessary to verify it."

Whether the experiment succeeds, or fails for want of experimenters, one valuable result will be attained. The honest believers will be known, and whatever the result, *their* names will stand high in our professional records. But what will be the verdict of the public and the profession on the course of those who decline to verify their loudly-vaunted hypothesis? They may find, between the dilemmas surrounding them, some loophole of escape; such men always have a ready excuse. The question is, will their excuse be accepted? If the experiment proves the truth of the high-potency dogma, what shame will be theirs who refused to aid in its establishment! If the reverse should follow, will *they* not run the danger of being accused of willful fraud? If neither of these conclusions are arrived at, and the question stands as before, they cannot repudiate the charge of self-acknowledged cowardice; and can never more address a college class, or a medical society, or write up a cure for a journal, mentioning the 30th or higher potencies, without blushing at the remembrance of the Milwaukee test.

Meanwhile it shall be our part to see that no one can hereafter plead ignorance of the proposed experiment; but to diligently cry it aloud through the land, and endeavor to reach every medical ear. We must expect abuse, ridicule, and misrepresentation. Such have always accompanied the efforts of honest lovers of truth. But relying on the purity of our motives, the justice of our cause,—ever looking steadily forward to the goal of our desires, the establishment of the truth,—we shall be content; remembering with the great Roman orator,* that "time obliterates the fictions of opinion, and confirms the decisions of nature."

* Cicero.

HIGH POTENCY CRITICISM.*

BY

SAMUEL POTTER, M.D.,

MILWAUKEE, WIS.

IN a paper published in the June issue of this journal I attempted to show that the only logical basis upon which the drug-efficacy of the high potencies rests is composed of a mass of rotten rubbish, called "cures," which have always formed the foundation of every piece of medical quackery by which the world of patients has been deluded from time immemorial. Not denying the existence of the efficacy in question, I appealed from the so-called evidence therefor, to a positive experiment, conducted by the believers themselves, but surrounded with safeguards against wilful or self-deception. In two short months I find myself the centre of a storm of "hail, dunder and blitzen, cyclones, volcanoes, earthquakes, tidal waves, profanity, scurrility, 'open letters,' and nitro-glycerin," as Professor Dudley too truly prophesied.

To put it in the form of a dialogue, it would read about thus :

DR. POTTER.—"I am neither a believer nor an unbeliever in the drug-efficacy of the high potencies, but an agnostic in regard thereto. I respectfully urge that the evidence therefor, though ample in quantity, is utterly deficient in quality; and hope to see some strictly scientific test of the matter made. In absence of a better one, I advocate that known as the Milwaukee Test."

DR. L.—"You must unhesitatingly accept Hahnemann and *his* homeopathy."

DR. P.—"Read the *Organon*. If that does not suit you, take your maiden name 'Eclectic;' otherwise I will hurl upon you the curse of Rome!!"

DR. B.—"Such an idea as yours is not fit for the mind of a pure Hahnemannian. Your bubble test will soon burst if you champion it."

DR. M.—"Suckling! bow down before your seniors."

* Reprinted from the Hahnemannian Monthly, October, 1879.

Dr. H.—“You have just got your diploma, and are afflicted with a diarrhoea of words. Constrict your upper sphincter.” (*Anglice*, “Shut up!”)

Dr. T.—“Schubert, Caspari, and Granvogl. These be thy gods, oh, Israel!”

Dr. B., playing on a hand-organ(on). —“You’re a liar! and the Hahnemannian a fraud!”

Dr. J.—“Borborygmi!! dunder und blitzen!! *brekekekex, coax, coax!!* You’re a piddling pyrrhonist, a callow fledgling, an encyclopaedic filterer! *Hic! hæc! hoc!* You part your hair in the middle!! *Hujus! huius!* I must pay my dues to my goddess, Cloacina. He spells Thomson with a *p*. Is that hydrous or anhydrous? *Anhydrous*, by Toodles, P. G. Tait, and Josh Billings, my authorities!”

Of these elegant evidences of splenetic stupidity, I can at present notice but one, namely, the accusation of dishonesty, falsehood, etc., in the matter of Hahnemann’s posology, and other facts of history concerning “the Master” and his apostles, made against me by the editor of the *Organon*, and by Dr. Pearson in the *Homœopath*. The former, in his last issue, takes advantage of an erroneous quotation* made by me in a footnote as an illustration, and calmly condemns my “assertions about Hahnemann, Jenichen, and many others” as “equally inaccurate,” displaying “either a shameful disregard for truth,” etc.

In thus impeaching the historical facts referred to in my paper, the Anglo-American *Organon* impeaches the veracity of Dr. Dudgeon, to whose lectures† I expressly referred‡ as my authority for the facts stated; such as Gross’ infected globules, Mure’s lice and deer-skin provings, the day theory of dose of Cruxent, the potentized shakes of Jenichen, the isopathy and lice eradicators of Hering, and the whimsical and contradictory senility of the immortal Hahnemann himself. As the editor of the Anglo-American *Organon* denies the truth of the facts stated, will it be considered heretical or presumptuous, if I respectfully suggest that the next thing in order is for that gentleman to offer some proof for such a sweeping condemnation?

Again, the editor aforesaid, and Dr. Pearson, accuse me of having falsified the record regarding Hahnemann’s posology. This point they feebly attempt to prove by the use of garbled

* The passage referred to (JUNE HAHNEMANNIAN, page 340, second footnote) was taken second-hand. I made the mistake of using it without having verified it; but corrected this error in a list of errata (*vide* September HAHNEMANNIAN, page 572).—S. P.

† Lectures on the Theory and Practice of Homœopathy, London, 1855, by R. E. Dudgeon, M.D., translator of Hahnemann’s Lesser Writings, and *Organon*.

‡ *Vide* footnote to page 331, JUNE HAHNEMANNIAN.

quotations from Dr. Hahnemann's papers, as well as from mine. My allusions to his dosage referred, not to his theories on the question of drug dynamization, but only to what we know of his actual use of drugs in his practice. I endeavored to show that, taking his homœopathic career as a whole, he was anything but a high-potency man in practice. My generous (?) critics leave out the qualifying words of the sentence they quote from me, and then proceed to quote against me equally garbled extracts from Hahnemann's writings. For example, Dr. Pearson triumphantly claims Hahnemann as a high potentate, he having used "the 90th in epileptic attacks." A reference to the passage* shows the true state of affairs to have been as follows, the italics pointing out the words omitted by Dr. Pearson: "Once having prepared a dynamized attenuation of Sulphur, up to the 90th dilution, I administered a drop of it on sugar to an aged unmarried lady who was subject to *rare* epileptic fits (*one every 9, 12, 14 months*), and within an hour afterwards she had an epileptic fit, and since then has remained quite free from them."

Dr. Pearson also states that Hahnemann "risked his life on the 30th, and cured himself of a dangerous attack with the 30th of Coffee," omitting, however, to say that the "cure" was made by "two *olfactions*, of Coff. cr. 30th first, and then of Cale."[†] He further asserts that Hahnemann, in 1843, "reported cases to Dr. Von Benninghausen, cured with the 60th potency." Turning to the book[‡] we find that, in the report of these cases, no potency above the 30th is mentioned, but Merc. and Sulph. were used therein in the 2d; and that the only reason we have for supposing that the 60th was an agent in these cases, is that, in a footnote, Dr. Dudgeon says that Dr. Von Benninghausen says that he (Von Benninghausen) understood Hahnemann to mean the 60th whenever he omitted to designate the potency employed. Truly the self-styled "true follower of Hahnemann" must acknowledge himself guilty of the "reckless unscrupulousness" which he so readily charges to my account.

Again, Dr. Pearson says that in "the entire *Organon*, every page . . . where the dose is referred to at all, the 30th or *higher potencies* always take the precedence." The italics are mine,

* Lesser Writings, page 763.

† Hahnemann's Lesser Writings, page 776. The smelling part of the "cure" would have destroyed its validity in the minds of even most high-potency men of the present day.—S. P.

‡ Op. cit., page 773.

and serve to point out the gross misrepresentation of which my critic is guilty, for in the five editions of that work there is not a single instance recorded of Hahnemann's having used a dilution or potency above the 30th, and but one distinct reference to the existence of such preparations.* Dr. Pearson might just as well have said, with equal truth, that "on every page of the Bible where railroads are referred to at all, the four-foot gauge, or narrower, always takes the precedence." Against such methods of argument I can only state the facts, and leave the conclusions regarding my critic's sincerity of purpose and honesty of statement to be drawn by the reader.

The table entitled "Hahnemann's Posology," in my June paper, was compiled from Dudgeon's lectures. Since its publication I have had the pleasure of reading a more complete presentation of the facts by Dr. Richard Hughes, in the *British Journal of Homœopathy* for April, 1878, from which I have compiled the table appended to this paper, which materially supplements the other. An analysis of the facts stated by Dr. Hughes does not show any material difference in the record. It will be found that all the definite references made by Hahnemann to any dilution higher than the 30th are only five in number, namely :

(1.) In his 71st year (1826) he said he found Thuja 60th more potent than the 30th in syphilis.

(2.) In his 77th year (1832) he said he had "once prepared" the 90th of Sulph. (see ante).

(3.) In his 78th year (1833) he said of the 60th, 150th, and 300th, that their action is of shorter duration than that of the 30th, "which is generally sufficient."

(4.) In the same year on one occasion he prescribed for himself olfactions of the 30th.

(5.) In his 83d year (1838) he mentioned the 50th as having "most penetrating efficacy."

Out of 183 recorded directions for the dose in his writings, after his announcement of the law of similars, only 27 are for the 30th, only one for the 60th, and not one for a higher potency.

Although in his 74th year he fixed on the 30th for every drug, six years later he departed from this rule by prescribing the use of the 6th and 24th ; and after seven years' further ex-

* 5th ed., note to § 287.

perience he ordered from his pharmacist the 3d trituration of several drugs. He used crude drugs for thirty-two years of his homœopathic career, down to the 73d year of his age (1828). In the last year of his life, the 89th, he prescribed Merc. and Sulph. in the 2d; and at his death his pocket-case was found to contain all dilutions from the 3d to the 30th, but none in a higher potency. In 1829 he disapproved of diluting beyond the 30th, saying to Dr. Schreter: "The thing must end somewhere; it cannot go on to infinity;" and, in 1832, he condemned Korsakoff's potencies as useless to the physician, though interesting as a proof of the divisibility of matter.

Therefore I would say with Dr. Hughes, that "the truest disciples of Hahnemann are those who follow him as he was in the years from 1796 to 1828, rather than those who count the 30th itself a low potency, and dwell habitually in an exalted region far above that which the Master but *looked into*, and himself but seldom entered."

HAHNEMANN'S DOSAGE, AS RECORDED BY HIMSELF. TABULATED FROM A PAPER BY DR. RICHARD HUGHES (*Brit. Jour. Hom., April, 1878*).

Year.	Age	Events and references.	Doses.	ψ	2	3	6	9	12	15	18	24	30	60
1796	41	<i>Low</i> "Similia" amount'd.												
1797	42		{ Ver. alb., grs. iv. Nux vom., grs. iv. Arn., grs. "a few." Ign., grs. ij-vij. Opium, grs. $\frac{1}{3}$ - $\frac{1}{2}$. Camph., grs. xl. Ledum, grs. vij. Cinch., 5i. Ipec., 1 part to 2000.											
1798	43				Bell.									
1799	44				Bell. Op. Cham. Bell.									
1801	45			Arn.				Nux.			Ars.			
1809	54													
1810	55	Organon, 1st ed.												
1814	59													
1816	61	Reine Arz., vol. ii.												
1817	62	Reine Arz., vol. iii.												
1818	63	Reine Arz., vol. iv.												
1819	64	Mat. Med. Pura, vol. v.												
1821	65	Reine Arz., vol. vi.												

{ Ver. alb., grs. iv.
Nux vom., grs. iv.
Arn., grs. "a few."
Ign., grs. ij-vij.
Opium, grs. $\frac{1}{3}$ - $\frac{1}{2}$.
Camph., grs. xl.
Ledum, grs. vij.
Cinch., 5i.
Ipec., 1 part to 2000.

{ Sp. nit. dul. mjj-
3j. in 24 hours.

Ver. alb., grs. iv.
Nux vom., grs. iv.
Arn., grs. "a few."
Ign., grs. ij-vij.
Opium, grs. $\frac{1}{3}$ - $\frac{1}{2}$.
Camph., grs. xl.
Ledum, grs. vij.
Cinch., 5i.
Ipec., 1 part to 2000.

Ver. alb., grs. iv.
Nux vom., grs. iv.
Arn., grs. "a few."
Ign., grs. ij-vij.
Opium, grs. $\frac{1}{3}$ - $\frac{1}{2}$.
Camph., grs. xl.
Ledum, grs. vij.
Cinch., 5i.
Ipec., 1 part to 2000.

Ver. alb., grs. iv.
Nux vom., grs. iv.
Arn., grs. "a few."
Ign., grs. ij-vij.
Opium, grs. $\frac{1}{3}$ - $\frac{1}{2}$.
Camph., grs. xl.
Ledum, grs. vij.
Cinch., 5i.
Ipec., 1 part to 2000.

THE MILWAUKEE TEST.

BY SAMUEL POTTER, M.D.,

MILWAUKEE, WIS.

THE last number of this Journal contains an article* on the above subject, which, professing to be strictly scientific, and to deprecate the partisanship which the author ascribes to the originators of the Milwaukee Test, is nevertheless so manifestly unscientific and partisan itself, that I cannot, in justice to the Milwaukee measure, permit it to go unanswered.

The article in question is unscientific because it appeals in every paragraph to the authority of the seniors in the profession—to the sayings of men, whom it terms “canonized,” with as much reverence as Rome gives to her saints; and because it indulges in the petty *argumentum ad hominem* which has for its weapons only such terms as “sucklings of homœopathy,” “recruits,” “colts,” etc., intruding themselves upon its reader *ad nauseam*. Science lets no authority, be he saint or demon, stand against an experimental demonstration. Science despises such tools as are quoted above! If the rawest boy can batter down the theories raised by its most revered names, scientific men do not hurl names at him, but calmly proceed to verify his

* *The Milwaukee Test*, by John C. Morgan, M.D., Philadelphia, Pa. *N. A. Jour. Hom.*, August, 1879.

experiments for themselves. When Hall struck the first great blow at the nebular hypothesis, last year, by the assertion that the newly discovered satellites of Mars do not obey its mandates; instead of sitting down upon Hall, and fixing their eyes on Laplace, the astronomers of the world turned their gaze to Mars, in order to verify the statements of the observer. But, in medicine how different! Let a young man propose to test the dogmas of Hahnemann, Dunham, or any other patriarch of Homœopathy, by subjecting them to a test in which the interested parties have no especial advantage, and he is met with misrepresentation first, then with abuse, and finally the passions of his fellows are appealed to in order to squelch such a dangerous "firebrand." The worn-out phrase: "My forty-two years' experience as a physician," is set up against his honest doubts, and if he refuses to accept the forty-two years' experience, and continues to demand a test thereof, the owner of the experience is insulted, and Hahnemann, like Jesus, crucified afresh.

The article referred to is partisan, because (1), its argument is all of this kind; (2) it fears that internal strife about potencies, will "retard our advance upon the strongholds of medical charity, and emolument as well." It fears, in plain English, that the "flesh-pots of Egypt," now so plainly in sight, will become more dim to homœopathic eyes. But the Milwaukee Academy of Medicine wants to get at the truth of the question of drug-efficacy in the 30th potency, and is not at present going after "flesh-pots;" its eyes are upon the promised land of TRUTH, and Egypt lays a long way to the rear, across the Red Sea of bigotry.

The author attacks the validity of the Milwaukee Test by raising a man of straw; taking a bit here, and a scrap there, out of Dr. Lewis Sherman's paper, and having built his man, calls it "*The Milwaukee Test*," and then proceeds valiantly to knock it down. This is a very old and simple method of warfare, but not always a successful one, inasmuch as, like a balloon, it only requires a slight pen-prick to bring it to grief. One point may be here stated plainly, so that all who run may

read. Dr. Lewis Sherman is not the Milwaukee Test, nor is the Milwaukee Test Dr. Lewis Sherman. These two identities have lately become so mixed, that we, in this region, sometimes wonder at the density of the fog which beclouds our eastern brethren, when discussing this subject. If Dr. Sherman stated, in his preliminary paper, certain conclusions which might, *in his private opinion*, be deduced from certain supposed results of the Test, there is therein not a scintilla of evidence that such are to be the foregone conclusions of any "jury," "court," or "magisterial" organization whatever. The deductions from the test must be left for each man to make for himself. The facts alone will be published. There is no "court," no "jury" in the case. The whole Society, composed of high and low, and no potency men, is responsible for the genuineness of the preparations, which are deposited in the hands of an unprejudiced layman (a Professor in Bowdoin College, and lecturer at Andover, from whom they pass to the experimenters. The experimenters have but one task, namely, to discover the one vial which, in each case, contains the medicated pellets. They are bound by no rules, no methods; but are left to choose their own manner of experimentation. Can anything be more fair? Yet the validity of this plan is impeached, because, forsooth, one Dr. Lewis Sherman has expressed some views of his own about the probable value of certain supposable results.

When the writer referred to comes to deal with the question of the probabilities of the test, he gets at sea without a rudder. Starting out with an utterly false premise; all his argument, founded thereon, must ignominiously settle in the waste of waters which has buried many an unseaworthy craft before. On page 114, after correctly stating the chance of *guessing* the correct vial as $\frac{1}{10}$ in the case of the pathogenetic test, he makes the curious and incorrect assertion that "if *anybody* does designate S, in the Milwaukee test, by the supposed physiological effects of Aconite on his body, the inevitable conclusion will be, that *nine chances to one*, the S (Aconite) is really there; and is recognizable, physiologically, and therefore *outside of hazard altogether*." The italics are mine, and serve to emphasize the

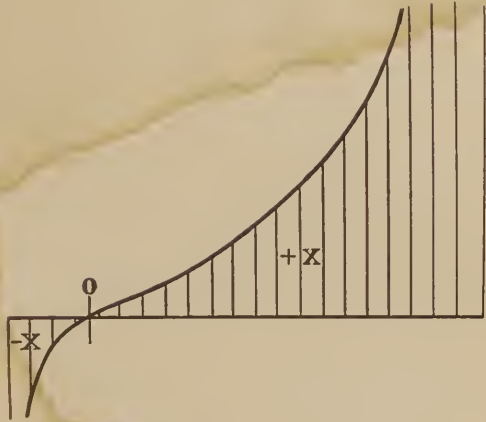
ludicrous character of the gentleman's commencement at the question of probabilities. If he would reverse his statement exactly, tail for head, he would be nearer the mark. According to the above statement, if *anybody* (any single individual) should designate vial No. 1, there would be *nine chances to one* that the Aconite is there, even though 999,999,999 other individuals should designate other vials. Or, if one designates vial No. 1, and another designates vial No. 2, and another No. 3, and so on, there would be nine chances to one that each of them is correct, that the S is really there. Any old gambler who ever lost money on the chances at cards, would laugh at such a statement of the doctrine of probabilities, and would bet money against Dr. Morgan's *anybody* every time. No! the chances in such a case would be stated thus: if one hundred are experimenting, there would be one chance that he selected the vial by reason of special cause (Aconite-power therein), to about 37,000 that he did it by pure chance.

If two should select the correct vial, the chance would be still about 1 to 35,000 that each of them selected the vial by the operation of special cause, and so on; the chance does not alter for each experimenter considered singly. But where the evidence for or against the existence of drug power comes in, is in the *number of experimenters* who *have* correctly designated the medicated pellets, as compared with the number who *have not*.

If there are one hundred experimenters who report, and less than ten have correctly designated the medicated pellets, there is no evidence for the existence of special cause. But if more than ten, if fifteen so designate them, the chance that they did so by virtue of special cause, will be as 9, to 1 that they did so by chance. If more than this are correct, the chances will be as follows:

NO. OF CORRECT REPORTS.	CHANCES IN FAVOR OF EXISTENCE OF SPECIAL CAUSE.	CHANCE AGAINST THE EXISTENCE OF SPECIAL CAUSE.
18 out of 100	99	1
20 " "	999	1
22 " "	9,999	1
30 " "	9,999,999,999	1

and so on, every additional correct result increasing the probability for the existence of special cause. This may be illustrated to the eye by a curve, somewhat like that appended, crossing the line representing the number of experimenters, at the point 0, or the 10 per cent. of that number.



Representing the probability for special cause by x , its value would increase rapidly, like the ordinates of the curve, with every additional correct result above the point 0. At this point $x = \text{zero}$; while below it x would have, if any, a minus value, and the probability against the existence of special cause would preponderate. There can, as a matter of course, from the nature of the question, be no absolute determination of the existence or non-existence of special cause; in theory the curve always approaching but never meeting the extreme ordinate, as it (the curve) departs towards infinity. The question, like all inductions of the kind, is wholly one of probabilities; but a probability like that shown above at the 30 correct reports, 9,999,999,999 to 1, is practically a demonstration. What, then, are the high potency opponents of this test afraid of, that they so loudly clamor against it, and so eagerly marshal their forces for its overthrow? There can be but one reply, namely, that they fear that they will not obtain enough correct results to establish a fair probability for the drug efficacy. Afraid! that out of one hundred self-styled experts in *Materia Medica*, they cannot muster twenty who can recognize their pet drugs, and establish a probability of 999 to 1 for their efficacy!

Here I would ask, what becomes of Dr. Morgan's "many fallacies" in his first reason for denying the validity of the test. "No allowance," he says, "is made" for unsusceptibility, disturbing influences, errors of dosage, intervals and judgment. On the foregoing basis, are not 70 incorrect answers out of 100 margin sufficient for all these disturbances? In that case the special cause would have a probability in its favor of 9,999,999,999, to 1 against it. Or, if 70 are not enough, take 80! The special cause will still have a probability in its favor of 999, to 1 against it. Remembering that not Aconite alone, but any common drug that may be called for, is furnished, and that each experimenter may select the drug which he prefers, it would seem that ample allowance is here made for all disturbing influences.

"What, then, is left of the Milwaukee Test?" asks Dr. Morgan. Instead of being "an effort to brand the whole of homœopathic practice," it will become, if such results as the above should follow, the pride of the high-potency believers, and the strongest possible evidence that the present basis of physical science is tottering. Whatever be the result, it will serve to direct the minds of truth-searchers towards exact methods of experiment, rather than the ever ready "cures," which have propped up all quackery since quacks first deluded mankind. This is already seen in the number and variety of similar experiments proposed to us since the Test was announced. But they all fall short in the strictness of their safeguards; they leave too many holes for rats to crawl through. Not one has been propounded which increased the severity of the safeguards against deception.

The Milwaukee Test has not been proposed for the purpose of *proving either side* of the question at issue. In this respect it is the least partisan of all that have been heard of, and presents a marked contrast to some, which have been undertaken for the expressly stated purpose of proving that the high potencies are efficacious. Its plan is very simple, and very clear to any one who wishes to understand it. The 30th Hahnemannian attenuation of any ordinary drug called for is prepared in the

presence of the members of the society, which includes high, low, and no-potency men in its ranks. The attenuation is then handed to the unprejudiced layman, who acts as depositor, and who from it medicates the pellets in one vial in each set of ten or two, as the case may be. From him these vials pass to the experimenters, who are chosen from believers in the high potencies exclusively; who, being practising physicians, and presumably the most familiar with the most delicate shades of symptomatology, are the best qualified men to seek for the medicated pellets. The layman keeps the record; no partisan has any control over it; the experimenters cannot possibly find out the secret of the vials, except by virtue of the drug-efficacy, or of chance. There is no pharmacist responsible for the power of *his preparations*, with a dozen employees to trust to in their preparation, who might easily be corrupted. The only chance for crookedness is in the person of the depositor; but his standing is so high throughout the whole country, and being a layman without any personal or professional interest in the question, except as a scientific problem, that contingency is reduced to a minimum.

We, of the Milwaukee Academy, believe that the arrangement of this Test is the best which has yet been proposed for this purpose; and earnestly desire the co-operation of any honest high-potency physician who wishes to place his faith on a basis which will be acceptable to the unbelievers. Last June, on Lake George, the writer asked the editor of this journal why he would refuse, if lecturing on physics, to demonstrate the existence of electrical force to a skeptical student who might offer him the battery and reagents wherewith to do so. The question was not answered then, nor has it been since. Yet this is exactly what the high-potency men are doing to-day in regard to the Milwaukee Test. Teaching the doctrines of drug-dynamization, and the existence of drug-force in these preparations, daily, aye, hourly, in journals, college classes, hospitals, private practice, etc., when they are approached with the tools, and asked to demonstrate it in a manner satisfactory to the skeptics, they turn aside in contempt, and point to their won-

drous "cures!" "Cures" which followed the touch of a royal hand, the uplifting of the eyes to a brazen serpent, the application of bits of wood colored to look like metal, the rubbing of an ointment on a weapon—"cures," which have constituted the sole stock-in-trade of charlatans in all past times—are offered to us as demonstrations! We have asked for bread, and they have offered us stones! Why should we not rebel at such parents, who are more cruel than were the Pharisees of old towards their hungry children?

THE MILWAUKEE TEST.

BY SAM'L POTTER, M. D., MILWAUKEE, WIS.

In the April "*Homœopath*," the profession is treated to a brace of arguments against a proposed test of the efficacy of the thirtieth dilution, although the editor of that journal declined to publish the proposition itself. To draw a legal parallel, it would stand thus: The court non-suited the plaintiff without hearing his case; and after having thus thrown the case out of court, admitted the arguments of the attorneys for the defense. The injustice of this proceeding is made more striking by the excuse offered for the editor's refusal of the pamphlet describing the Test, namely: that the "*Homœopath*" never published an article which had been printed, or which had appeared in another journal. Yet Dr. Pearson's "open letter," one of the arguments referred to above, appeared in the "*Hahnemannian Monthly*," fully two weeks before it was published in the "*Homœopath*." It evidently makes a difference (to the editor of the "*Homœopath*") whose ox is being gored!

In the old times, when *Homœopathy* first lifted its head, and was driven from the professional forum by just such flimsy excuses, which were immediately violated for the benefit of the other side, it appealed to public opinion through the secular press—with what success is manifest to-day. Must the Milwaukee Academy of Medicine also appeal unto Cæsar? The answer lies with the editors of the medical press.

The editorial attack in the "*Homœopath*" asserts several facts regarding the proposed Test, which are not warranted by the language of the proposition; and as the readers of that journal have not had an opportunity of examining the latter, I may be pardoned the following comparison. It is evident that the editor had not given the Test a careful examination, as he would not, in that case, have fallen into the egregious errors indicated by the italicised words.

THE EDITOR OF THE HOMŒOPATH.

"They propose to issue ten vials * * * nine (saturated) with pure alcohol, or *nothing at all*."

"Each recipient is expected to be able, by means of *having tested the pellets upon himself*, * * * to designate which vial contained the remedy."

"Now, what potency is it proposed to use? * * * It would certainly be absolutely necessary that we should first determine and agree upon what is a potency."

"Is this a *proving* of the drug"?

THE MILWAUKEE ACADEMY.

"Nine similar vials moistened with pure alcohol * * * shall be given to the prover."

"It shall be his task to determine which of the ten vials contains Aconite."

"A vial of pure sugar pellets, moistened with the *30th Hahnemannian dilution*, * * * shall be given to the prover."

"The plan proposed for *testing the efficacy* of the 30th Hahnemannian dilution."

The editor assumes that the Academy proposes to prove drugs. The Academy proposes nothing of the kind. It makes to the blatant high-potency advocates the same proposition that a skeptical student might fairly make to a teacher of chemistry or electricity, asserting the existence of chemical or electrical force. "*Demonstrate it! Here are the tools!*" Suppose the teacher of physical science draws back from the battery and the reagents, saying in response, "It is not necessary; it has been proved to my satisfaction. I can not see any benefit to be derived from such an experiment." What would be the verdict of the class and the profession? Certainly it would be somewhat like Dr. Pearson's verdict on himself: "Either a fool or a rascal." Yet this is what the editor of the "Homœopath" and its Washington letter-writer actually say in regard to our appeal for a crucial experiment—they offer us "cures" for demonstrations. We have "asked for bread," and they have given us a stone. In the light of all honest experience, of all the facts of medical history, all the conclusions of philosophy, we unhesitatingly answer, "cures are not demonstrations!" "Cures" followed the touch of a kingly hand, or of a magician's wand; "cures" followed the use of Perkins' metallic tractors, the uplifting of the eyes to an image—the rubbing of an ointment on the weapon inflicting a wound. "Cures" have been the stock in trade of quacks in all lands during all the ages. "Cures" have followed

upon the exercise of every expedient which the rascality or credulity of man could devise. Why should they not follow on the administration of sugar of milk labeled Phos.²⁰⁰? Whether the relation be that of cause and effect is altogether another question.

Talleyrand said that language is "a means of concealing one's thoughts." The editor of the "Homœopath" must have had this saying of the great diplomat in his mind when he penned the following paradox: "The 30th potency, a highly attenuated dilution." He evidently is not a "true Hahnemannian," for "the Master" and his Apostles all held that a potenziized drug is best made without attenuation, such being, in fact, the process of those fathers of the high potencies, Korsakoff, Jenichen, Gross and Hering.

As usual with his school, the editor winds up with an assertion of his individual experience, evidently intended to be crushing. He says that "a well-selected remedy will often fail * * * in the 30th, and cure in the 200th, and *vice versa*." He is not so positive in his opinion as to the effects of mercury in the case reported by S. M. D., in the same issue of the "Journal," where the evidence is clearly presented. But can the editor or any other high potency Homœopath tell us *when* the 200th will cure? Formulate the law for the selection of the potency, gentlemen, if you can! If, as you say, the "cures" have been amply sufficient to establish the fact that these preparations have drug-power, why have they not led to even a hint at the *Law for Selection of the Potency*, to take its seat beside the Law for the Selection of the Remedy?

The "open letter" of Dr. Pearson (clipped from the "Hahnemannian Monthly" by the "Homœopath," without acknowledgement), has all the signs of the city of its birth, together with an evident emulation on the part of its author, of the Picric (Pickwick) style of a certain Western professor of blackguardism. Dr. Pearson assumes that he is either a "fool or a rascal," in a certain contingency, and respectfully declines to prove

which. If he is "a fool or a rascal," and declines to enter on the Test for fear of its proving him to the world what his conscience suggests to himself; the Milwaukee Academy can only accept the reason as a very ample one, and thereupon excuses him, feeling quite certain, however, that he is *not* "a rascal."

Many years ago a medical student is reported to have made a somewhat similar proposition to his preceptor, a then eminent practitioner in Valladolid, Spain. His reply makes an interesting commentary on that of Doctor Pearson.

DR. PEARSON, OF WASHINGTON.

"If I have known that the medicines I have been using for thirty years were inert, I have been obtaining money under false pretenses, and am dishonest. If they are inert, * * and I have failed to make the discovery, I must be incapable of forming a rational conclusion on any subject. I beg most respectfully to decline."—*[Amer. Homœopath.*

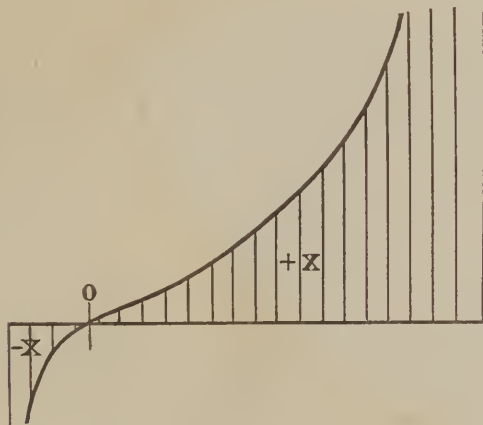
DR. SANGRADO, OF VALLADOLID.

"I would willingly give it a trial, if it were a matter of indifference. but I have published on the practice of bleeding and the use of drenches. Would you have me cut the throat of my own fame as an author? * * Our enemies must not gain the triumph over us; they would say you were out of conceit with your own system, and would ruin your reputation for consistency."—*[Gil Blas, B. II. Ch. V.*

How beautifully do these eminent men agree on the "true inwardness" of this question!

The doctor then asks, "Suppose I get no results from any of them; what then?" This is a fair question; but he falls into the error of answering it for the Academy, and by an assertion for which he has no warrant. He replies: "You say, and tell the world, that there is nothing in the 30th attenuation." Where and when have we said so? For my part, I would, in that case, simply count the doctor out, marking his evidence, like his argument, "worthless." Others may think that such negative results should be counted against the efficacy of the so-called "potency." The Academy propose to submit all the results to some man of national reputation in this specialty of probabilities, such as Professor Newcomb, of the Naval Observatory; Professor Peck, of Columbia College, or Pierce, of the Coast Survey.

According to the doctrine of probabilities, ten per cent. of the experimenters will *guess* the result correctly. When this quantity is eliminated, the preponderance of probability for the inertness has ended, and every further correct result increases that for the efficacy of the dilutions; the probability, therefore, increasing in a rapid ratio, as the number of correct results increases. This may be illustrated to the eye by a curve, somewhat like that appended, crossing the question from positive to negative



probability, at the 10 per cent. of experimenters. Representing the probability in favor of the efficacy of the 30th by x , the value of x would increase with every additional correct result above the point marked 0. At this point x would equal zero, while below it x would have, if any, a minus value. Of course there can be no absolute determination of the efficacy or inertness, such being impossible from the nature of the case; in theory the curve always approaching, but never meeting the extreme ordinates, as it departs towards infinity. The questino, like all inductions in physical science, is wholly one of

probabilities. If one hundred high potency men enter on the experiment, and forty Pearsons get "no results," and should be (according to my view) laid aside for the time being, there would be left sixty, of which 10 per cent., or six, would have no value, as above explained. If, then, seven out of sixty select the medicated vials, there will be a very slight probability in favor of the efficacy. If eight or nine are correct, the probability will be increased, and so on, the value of x increasing enormously with every additional correct report. If sixty to ninety per cent. give correct results, the theory will be practically demonstrated. Yet Dr. Pearson confesses his fear that his side will not get enough to establish the probability of what he knows to be "a fact." Truly he can have but little faith in the power he claims for the 30th, when he stigmatizes the above proposition "a fruitless task, and as a death-thrust at Homœopathy—one that its vilest enemies have hitherto failed to equal." Afraid, Doctor, that out of one hundred high-potency men experimenting with their pet drugs, you cannot get seven who will be able to recognize their own children! Is it the efficacy of the "potencies," or the ability of your colleagues that you distrust?

The closing paragraphs of this open letter are tuned in unison with the war cries heard at every society meeting, and seen in every journal, whenever and wherever the High-Potency Question comes under consideration. The appellations, "*Traitor!*" "*Enemy!*" "*Eclectic!*" are the substitutes for scientific argument, which these self-called "consistent Homœopaths," hurl at those who decline to be enslaved by their wondrous "cures." Advices to abandon what these Pharisees call "genuine Homœopathy," usually follow, and Dr. Pearson's letter is no exception to the rule. Doubtless, like the rebels in 1861, they would be delighted to be "let alone," to have all scientific inquirers eliminated from the Homœopathic ranks; that, sitting down under the dark pall of superstitious veneration for every rag of theory or whimsical speculation, which can be traced to "the master's" brain,

resting in the slough of besotted and unquestioning dogmatism, they may worship their fetich, with no rude testers to disturb their peaceful slumber, no trumpet-call for dangerous experiments. But, unfortunately for their claims, the shadow of the venerated name of Hahnemann is not cast over their practices. Their stating so does not make it true. Hahnemann, by words and deeds, distinctly repudiated the very heart of the high-potency delusion. By words, when he commanded his followers to stop at the 30th, saying, "The thing must end somewhere, it cannot go on to infinity."* By acts, in the use he made of drugs in his practice, rarely giving the 30th, never going beyond it; and, in the main, keeping to low attenuations during his entire life.† The geni, whose processes and theories shelter Dr. Pearson and his school, are the Sarmatian Count, Korsakoff; the horse-jockey, Jenichen; the lunatic "infector," Gross; and the Isopath, Constantine Hering.‡

The "maiden name," which Dr. Pearson is anxious should be adopted by the members of the Milwaukee Academy, is one which every truly scientific physician will welcome. By this I do not mean that so-called "Eclecticism," which, professing to be liberal, binds its members in the dogmatic shackles of a creed of negations; but that true Eclectic liberality, which flings to the winds all dishonest pretension; and, in the words of the resolutions of the New York State Homœopathic Society, would "exercise and defend the inviolable right of every educated physician, to make practical use of any established principle in medical science; or of any therapeutical facts founded on experiments, and verified by experience."

Whatever Dr. Pearson and the editor of the "Homœopath" may think of the advantages to be derived from the proposed test, it will certainly be carried out to the bitter end; and, as it is believed by many of the best men

* Letter to Dr. Schreter, Dudgeon's Lectures, page 407.

† Op. Cit. pp. 400-408.

‡ Op. Cit. pp. 351-357 and 143.

in the Homœopathic ranks, will accomplish much, whatever its result, in the direction it will give to our observation of the complex results arising from a plurality of causes—as seen in the phenomena of life. John Stuart Mill, the prince of modern logicians, in discussing this question, says, of the operations necessary to establish a complete deduction, that they are three: “the first, one of direct induction; the second, of ratiocination; the third, of verification,§ without which (verification) all the results have little other value than that of conjecture.”¶

This final, crucial operation, is sought to be applied by the Milwaukee Test. The manner of its reception by many of those who have most to gain from it, *if their claims are true*, puts one in mind of the class described in the hackneyed yet pungent aphorism, “*quos Deus vult perdere prius dementat.*” (“Whom the Gods wish to destroy, they first make mad.”)

§ Mill's Logic of Induction, Book III., Chap. X., Secs. 6-8.

¶ Op. Cit., Book III., Chap. XI., Sec. 3.

THE MILWAUKEE TEST.

BY SAMUEL POTTER, M. D., MILWAUKEE, WIS.

In the February number of the *Advance*, Dr. Wilson endeavors to score a few marks for the transcendentalists, in ridicule of the Test of the 30th Dilution, proposed by Dr. Lewis Sherman and published by the Milwaukee Academy of Medecine. As the Dr. confines his argument (?) chiefly to the use of such adjectives as impotent," "absurd," "ludicrous," "imbecil (e)," etc., I shall not attempt to reply. To do so would be a degradation of the sublime art of logic. But there is one feature of his paper which seems to me to deserve rebuke, and that is the self-confident, dogmatic manner in which he writes about "science."

The doctor tells us that "science discovers, reveals, demonstrates, proves. Science commences with the "inference," and considers nothing done until it pushes "forward to the possession of the fact." This will be news to Spencer, Huxley, Tyndall, and all the acknowledged scientists of the day, and equally surprising to those who with Webster have looked upon *inference* as the *result* of observed facts; the "conclusion" (see Webster) derived from facts; not, as Dr. Wilson would have it, facts derived from a conclusion. Taking Webster's definition of the word "inference," and the eminent journalist's sentence would read thus: "*science commences with the conclusion, and considers nothing done until it pushes forward to the possession of the fact.*" Oh! great shade of Bacon! why were you not floating around the Doctor's brain when he penned this grand scientific dogma? But as all scientific writers contend that the method

*This article was probably written in November, 1878. (Tr.)

of science is exactly the reverse from the Doctor's, we may dismiss this portion of his criticism with the most charitable conclusion; namely, that he doesn't know what he is writing about.

However, he asserts that science "demonstrates, proves, reveals," the demonstration being that there is medicinal power in the 30th or higher dilutions. How science can *reveal* any fact which it also *demonstrates* is beyond my comprehension. Revelation is supposed to be an unscientific method; at least so say Huxley, Darwin, Tyndall, etc. But the "Science" of the "*Advance*" publishing office can both "demonstrate" and "reveal." But I challenge Dr. Wilson to meet me in support of both his propositions; for I deny as positively as he asserts, (1) that scientific men have ever presumed to invade the arcana of nature, since Bacon's day, to prove or demonstrate any scientific dogma. The history of science shows clearly that scientific truths (so called) are but inferences, hypotheses, assumptions, and the like, which "to-day are, and to-morrow are cast into the field." I deny (2) that the efficacy of the high dilutions has ever been proved according to the scientific method, or has been acknowledged by a single man to whom the scientific world has ever applied the name of "scientist." If there is one to be found let us know his name! On the contrary, I can bring hosts of witnesses from the scientific ranks to prove that this theory is utterly rejected by "science," as the veriest idiocy. And rightly so, until the evidence offered is more scientific. What is the evidence! Cures, we are told, reported by interested parties, who never report any *failures to cure* by these preparations. When the evidence offered conforms to the rules of legal or scientific evidence, and presents both sides, the failures as well as the cures, then "science" will probably deem the matter one for consideration. When a test is proposed aiming at the recording of such statistics, it is met by the adjectives quoted above, "ludicrous, imbecil (e)," etc. Yet they who use such terms brag of "science," frown down

all honest skepticism, and think to repress the search after truth, by false, impudent assertion.

Well did Butler describe such men, who even in his day, no less than in ours, would

“ Unriddle all that mankind knows,
 With solid bending of their brows;
 All arts and sciences advance,
 With screwing of their countenance;
 And with a penetrating eye
 Into th' abstrusest learning pry;—
 For fools are known by looking wise,
 As men find woodcocks by their eyes.”

Such men are to-day as common as then, who, falsely termed physicians, knowing nothing of science yet prating constantly of it, borrow the livery of heaven to serve the devil in, and calling themselves Homœopaths, have brought on Homœopathy more disgrace, through their ignorant assumption, than the assaults of orthodox physic have ever brought it injury.

I would not class Dr. Wilson in this category, but would warn him of the danger he is in of classing himself therein, by his use of their language, their weapons, as methods of argument.

The Milwaukee Academy of Medicine is composed of high and low potency and no potency physicians, who, recognizing the unscientific character of the evidence for the efficacy of the high dilutions, and honestly desiring the settlement of the question as far as it can be settled by the only scientific means, that of experiment, adopted Dr. Sherman's plan for conducting such an experimental test, it seeming to the Academy to be fair, impartial, simple and scientific. That all may join in the test and that there may be no suspicion of “cookery” or star-chamber investigation, the Academy published the proposition, and calls on all lovers of truth to aid in the effort to place the theory on a scientific base if worthy. Dr. Wilson replies by assertion, ridicule, contemptuous epithet, but does not advance a single proof that the method is faulty, the plan unscientific, nor does he suggest a better one.

He assumes that Dr. Sherman is an unbeliever, and then berates him for his unbelief, forgetting that the Milwaukee Academy of Medicine is the party responsible for the proposition, not Dr. Sherman. He sets up a man of straw, calls him Sherman, and then valiantly proceeds to knock him down.

The Milwaukee Academy propose to let the world judge of this question, and when, at the end of the year, the Symposium is published, it will be seen who are on the side of truth, and who are afraid thereof. But "*Truth is mighty and will prevail!*"

THE POTENCY QUESTION;
OR,
THE DOCTRINE OF TRANSUBSTANTIATION.

BY

✓
LEWIS SHERMAN, A.M., M.D.,

MILWAUKEE, WIS.

THE POTENCY QUESTION.

BY LEWIS SHERMAN, A.M., M.D., MILWAUKEE, WIS.

A TABLE showing the diameters of spherical masses necessary to contain one drop, one-tenth of an inch in diameter, of medicinal substance, raised to the different degrees of Hahnemann's scale of potentization :

Potency.	Diameter.	
0.....	1	inches.
1.....	.46416	"
2.....	.21544	"
3.....	.10	"
4.....	.3.868	feet.
5.....	.17.87	"
6.....	.83 $\frac{1}{2}$	"
7.....	.386.8	"
8.....	.1,787.	"
9.....	.8,333 $\frac{1}{3}$	"
10.....	.7 $\frac{4}{10}$ $\frac{3}{2}$	miles.
11.....	.34.	"
12.....	.157 $\frac{8}{9}$ $\frac{2}{9}$	"
13.....	.732.	"
14.....	.3,400.	"
15.....	.15,782 $\frac{8}{9}$ $\frac{2}{9}$	"
16.....	.73,260.	"
17.....	.340,000.	"
18.....	.1,578,282 $\frac{8}{9}$ $\frac{2}{9}$	"
19.....	.7,326,000.	"
20.....	.34,000,000.	"
21.....	.157,828,282 $\frac{8}{9}$ $\frac{2}{9}$	"
22.....	.732,000,000.	"
23.....	.3,400,000,000.	"
24.....	.15,782,828,282 $\frac{8}{9}$ $\frac{2}{9}$	"
25.....	.73,260,000,000.	"
26.....	.340,000,000,000.	"
27.....	.1,578,282,828,282 $\frac{8}{9}$ $\frac{2}{9}$	"
28.....	.7,326,000,000,000.	"
29.....	.34,000,000,000,000.	"
30.....	.157,828,282,828,282 $\frac{8}{9}$ $\frac{2}{9}$	"

These magnitudes may be better appreciated by comparing them with the magnitudes of familiar physical objects.

(0.) The *crude* medicinal substance may be represented by a number three homeopathic pellet.

(1.) The *first* dilution would occupy a space as large as an acorn.

(2.) The *second* would be represented by an orange.

(3.) The *third*, by a pumpkin.

(4.) The *fourth*, a hog's head.

(5.) The *fifth*, an *apartment* in a house.

(6.) The *sixth*, the interior of a church.

(7.) The *seventh*, an Egyptian pyramid.

(8.) The *eighth*, eight times the capacity of the great Croton reservoir.

(9.) The *ninth*, eight hundred times the capacity of the great Croton reservoir.

(10.) The *tenth*, the water in Seneca Lake.

(11.) The *eleventh*, the water in all the five Great Lakes.

(12.) The *twelfth*, the water in the Mediterranean Sea.

(13.) The *thirteenth*, the water in the Pacific Ocean.

(14.) The *fourteenth*, forty times the whole quantity of water on the earth.

(15.) The *fifteenth*, a body of liquid eight times as large as the whole earth.

(16.) The *sixteenth*, a body of liquid eight hundred times as large as the whole earth.

(17.) The *seventeenth*, a body of liquid eighty thousand times as large as the whole earth.

(18.) The *eighteenth*, a body of liquid six and three-tenths times as large as the sun.

(19.) The *nineteenth*, a body of liquid six hundred and thirty times as large as the sun.

(20.) The *twentieth*, a body of liquid sixty-three thousand times as large as the sun.

(21.) The *twenty-first*, a body of liquid eleven times as large as the sun would be if it were swollen up so as to include the orbit of Mercury.

(22.) The *twenty-second*, a body of liquid sixty times as large as the sun would be if it were swollen up so as to occupy the orbit of the earth.

(23.) The *twenty-third*, a body of liquid sixty thousand times as large as this imaginary sphere encircled by the earth in its orbit around the sun.

(24.) The *twenty-fourth*, a body of liquid twenty-three times as large as the imaginary sphere encircled by the orbit of Neptune.

(25.) The *twenty-fifth*, a body of liquid two thousand three hundred times as large as the whole of planetary space.

(26.) The *twenty-sixth*, a body of liquid two hundred and thirty thousand times as large as the entire space included in the solar system.

(27.) The *twenty-seventh*, a body of liquid twenty-three million times as large as the entire space included in the solar system.

(28.) The *twenty-eighth*, a body of liquid two thousand three hundred million times as large as the entire space included in the solar system.

(29.) The *twenty-ninth*, a body of liquid four and one-half times as large as a sphere whose diameter would extend from the earth to *Alpha Centauri*, the nearest fixed star.

(30.) The *thirtieth*, the quantity of liquid which could be contained in fifty-six spheres, each as large as the one which would be formed by taking *Alpha Centauri* as a centre, and the remotest part of the solar system as a point on the surface.

It would take the earth, moving at the rate of a thousand miles a minute, a period of *two hundred and thirty thousand years* to traverse the circumference of *one* of these spheres.

The exact diameter of a sphere of liquid large enough to contain one drop, one-tenth of an inch in diameter, raised to the thirtieth centesimal dilution, is 157,828,282,828,282 miles, 2790 feet, 3^{26} inches. The number of cubic miles in such a sphere is 2,058,510,642,141,870,000,000,000,000,000,000,000,000,000.

The diameter of this sphere is more than seven and three-fourths times the distance of the nearest fixed star. A ray of light, traveling constantly day and night, at the inconceivable velocity of 186,500 miles in a second, or 5,885,492,400,000 miles in a year, would require twenty-six years, nine months, and twenty-three days to traverse the diameter of this vast sphere.

This question will occur to many: "How then is it possible to prepare the thirtieth dilution with only a few ounces of alcohol?" The explanation of the mystery is, that not all of the original quantity of the medicinal substance is diluted by Hahnemann's process. Only one drop of the first dilution, containing one-one-hundredth of a drop of the original substance, is used in preparing the second dilution; only one drop of the second dilution, containing one-ten-thousandth of a drop of the original, is used in preparing the third; only one drop of the third, containing one-one-millionth of a drop of the

original substance, is used in preparing the fourth, and so on. Nevertheless, by this ingenious device, the same degree of tenuity or scarcity of the medicinal substance is produced as would be produced if the entire original drop were diluted in the vast quantity of liquid symbolized by the figures at the end of the above table.

If, as the most eminent physicists estimate, there are about 19,000,000,000,000,000,000 molecules in a cubic centimeter of gas under ordinary conditions of temperature and pressure, we may reckon that there will be, on an average, about 50,000,000,000,000,000,000 molecules in a spherical body of liquid one-tenth of an inch in diameter. There would be then *one molecule* of the medicinal substance in every 41,170,212,842,837,400,000,000 cubic miles of the thirtieth dilution, provided that the whole mass had been *thoroughly shaken*. There would only be one chance in 8,000,000,000,000,000,000,000,000,000,000 that a medicated pellet of this dilution could contain a molecule of the drug.

These calculations are not presented for the purpose of proving that the thirtieth dilution is medicinally inert. All that is intended here is to show that there is a sort of *a priori* improbability that there is in these dilutions any medicinal power peculiar to the drugs after which they are named.

It is held by advocates of the dynamization theory that the *presence* of a drug is not necessary to the production of its peculiar effects in the human body, although this presence is necessary to the production of any effect outside of the body. The properties of the medicinal substance are supposed to be imparted by contact to the sugar of milk, the water, the alcohol, and the cane-sugar with which it is mixed. This milk-sugar, this water, this alcohol, and this cane-sugar are supposed to be capable of imparting the aforesaid properties (without themselves losing them) to other milk-sugar, water, alcohol, and cane-sugar, and so on to an indefinite degree. A single molecule of a drug can thus impart the properties of that drug to millions of millions of cubic miles of these indifferent substances. We are told that a given quantity of a "dynamized" indifferent substance (alcohol, for instance), though containing no part or portion of the substance whose name it bears, will produce in the human body the effects of that substance more certainly and more powerfully than the same quantity of the drug itself.

This is said to be a "fact" repeatedly observed. The *ve-*

racity of the observers is not impeached by the statement that the cure of a disease is not a subject of direct observation. The *veracity* of the witnesses is not impeached by the affirmation that no disease was ever produced or cured by the thirtieth dilution of any drug. The witness tells what he hears, sees, feels, tastes, or smells; it is the province of the judge or the jury to decide the question according to the preponderance of evidence.

In this case the evidence does not satisfy the jury that the thirtieth dilutions represent the qualities and powers of the drugs after which they are named.

An experiment has been proposed and instituted which with the co-operation of the believers in the efficacy of the thirtieth dilution, will furnish the evidence necessary to decide the question.*

The boasting claimants begin to make excuses. They dare not undertake the experiment for fear of failure and disgrace. There are a few noble men among the believers in the efficacy of the thirtieth dilutions. They will carry out the experiment. Whatever may be the result of the test, there can be no doubt in regard to the verdict of the world on the character of the men who claim to believe in the high potencies.

If it can be proven that a particle of alcohol, sugar, or water, which has once been near a particle of some substance *intended to be potentized*, but which does not contain any portion of that substance, is capable of imparting to forty-one sextillions of cubic miles of alcohol, sugar, or water, all of the properties of the original drug which can influence the human body without imparting any of the properties known to the most expert physicists, I shall hail the discovery with delight, but I must have better evidence than that which substantiates the therapeutic value of Ayer's Cherry Pectoral, or Kennedy's Medical Discovery.

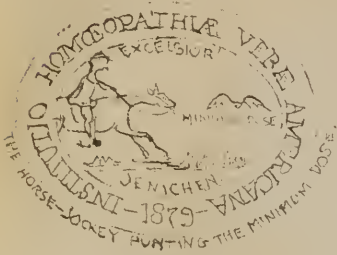
* A Test of the Efficacy of the Thirtieth Dilutions, published by the Milwaukee Academy of Medicine. See March, 1879, number of HAHNE-MANNIAN.

"[When the devil cannot upset the coach, he gets on the coach-box and drives.]"

Private and Confidential.

Rooms of the Hahnemannian League;
High-Potency Bureau,
Dynamization Division.

Philadelphia, August 30th 1879



To all true Hahnemannians, who are
interested in securing the establishment

of such exact methods in medical science as will prove beyond
any doubt the truth of Hahnemann's dogmas.

Brothers, the Philistines are upon us! We must
arise in our might, and seize their weapons!! Thus only
shall we conquer them!!! Listen, oh ye true believers, ye
who have never by word, or deed, or thought impeached the
infallibility of our Master, the great God of Medicine,
leave your priceless nosodes! your glorious bottle-washings!!
your inexhaustible symptomatology!! your 200th develop-
-ments of drug spirit!! your 10000th potential dynamizations!!
your cms! your mms! and your S. Albumen lactis!!! and
listen while we set forth to you the dangers which threaten our
system, and unfold a plan for its salvation!

The Milwaukee Sect must be crushed, or it will ruin
all our reputations. "Unfortunately" has so many ele-
-ments of fairness about it that there is great danger
of its seducing our students, who innocently like to have
their ears tickled with Science. Herein we have hitherto
had the advantage. We could refer with pride to our dead
scientists, Hahnemann! (speak the name with humility
and reverence!) Grainger! Pouchard!! The wonderful discov-

eries in Chemistry by the first, who found a new preparation of mercury; the Thuja-power of softening Lamb-nails, given to the world by the second; and the meek simplicity with which the third "cured" all the sick of New York; - these have been objects of proud worship in our scientific classes heretofore. Then we have as living Chieftains men who will soon pass beyond the veil and become deified, such as Hering, who discovered snake-fangs and nitro-glycerin; Lippe, who invented the improved homoeopathic Hand-Organ (on), and made it an international affair; Swan and Fincke, and Skinner, who invented the great bottle-washed potencies; J. Edwards Smith, the microscopeist, who invented the process of proving the existence of a nucleus in the protoplasm of a tooth-pick; and last, but not least the giant Jones, the little man with the big-head, who discovered Picric Acid, and found the one-ten-millionth of a grain of gold dancing a horn-pipe in the centre of a blood-corpuscle, fished from the nearest Clouza.

But these Milwaukee Ironclads have risen above old enmities, and have dared to attack the underpinning of our gorgeous temple. Not content with refusing to worship Hahnemann, they have vilified Hering, abused that good old man Lippe, laughed at Grauwogl's uniform, which they said was only a militia-holiday suit; reviled Jerichon, whom they call a horse-jockey; sneered at Swan; giggled at Smith; and proved Jones to be an ass so clearly, that he has never looked into a microscope since. But worse than all, they have proposed a Test of our thirtieth potential-liberations-of-vitalis-correcting-dynamism. They have actually started an experimental list of the pathogenetic and therapeutic efficiency of the various variations of

divinity which sprang from the brain of the first God in our Southern. They have seduced thirty believers into becoming the experimenters, so that we cannot impeach their qualifications. They have published their plan over the English speaking world, and threaten to give it to the secular press if they are shut out from the medical journals.

Their plan is horribly scientific, there isn't a rat-hole to creep out of. If our students hear of it as it is, they will begin to sneer at our way of teaching Science. Our usual method of induction, beautifully exemplified by Hering's grand argument, that because gold and platinum are found on opposite sides of a mountain range, therefore gold is indicated in the morning when the sun shines on that side; and platinum in the evening, when he beams from the west, — such logic is doomed to ridicule if the Milwaukee method becomes the fashionable model in homeopathic Science.

In their test there is no allowance made for the many difficulties which are high-potency men meet with in making a cure. We do often fail to cure, though for obvious reasons we never report the failures. The want of susceptibility to drugs, the errors of observation and of diagnosis, the errors we make in the intervals between potencies and in the altitude of potency, are not counted. We are held to a strictly impartial trial of our infallibility as Symptomalogists, and the infallibility of the thirtieths as medicines. Two things which we have hitherto proved ^{beyond} the shadow of a doubt in our own minds by our reports of Cures. But the value of clinical evidence is impeached, so that we are even doubting ourselves if we ever really did make a Cure.

The worst feature about the Milwaukee method is

that high-potency men alone are to be the dispensers, without a ghost of a chance to disprove. All of the ten contains the medicine except by its power to influence the human organism. The pellets are not even to be prepared by one of our conscientious high-potency-pharmacutists, who in the enterprising spirit of Commercial Competition might be induced to drop in a little quack after the 30th was made in order to prove his potencies to be more effective than any other pharmacutists. Not the whole Academy meets and potentizes the drugs by the spiritly Robinson's directions; and with Dr. Christed, who was a professor at Cleveland, Dr. Lewis, who uses 200^{ths} altogether, and Dr. MacDermott, who sat at Sigsbee's feet, - with these men present, we cannot throw any slur upon the genuineness of the preparations.

If they could only be distributed by a physician we would have some chance. If he were a high-potency man he would tell us which was which, for the sake of the cause, especially if he had prescribed high potencies for forty two years, and committed himself squarely to their efficacy. If he were a low-potency man, we could accuse him, as Howell did the Secretary of the French Society, of having played us false by not putting any medicine into any of the vials, or having kept a false record. But none of these doors are open to us. They have selected an absolutely safe depositor, an unprejudiced layman, a Rev^d Professor in Bowdoin, to mediate the pellets and keep the record, and alas! his character is too high to permit of his being corrupted, and he has no children.

Seeing the danger to pure homoeopathy, our gentlemen tried to crush it. The first one opened the ball, by

using our favorite weapon, ridicule. But unfortunately he got mixed between an inference and a conclusion and a scientific slap from Milwaukee shut his mouth so tightly that he has since uttered only feeble wails. Next our theological Champion, that noble black man, thundered from Olympus with the mighty voice of the old Israel Organ (on), hurling "the curses of Rome" thick and fast, and we thought we were going to win. But, sad to say, he was caught on the fly, so to speak, by that same Hebrew City Iconoclast and proved guilty of slightly changing the tune of the Organ to suit himself. At the Institute he made a last stand against his adversary. But his voice only met one echo, its own, and he was ignominiously voted down, before the face of Lippe, and all our younger lights. He has endeavored to kick since several times, but each kick has been more feeble than the last, and he is now on his final quiver. Our noble editors bravely stood up in turn, only to be knocked into pi in the columns of their own journals. Our little giant, from whom we expected so much, failed completely, everything except scattering dirt from his Cloaca, and made many mistakes in his Latin, physics and even in arithmetic, stating the difference between two fractions as a whole number, but he was completely used up, called in polite terms a frog in a ass, an ignorant pretender to scientific knowledge, a fool, and a liar. We all here thought we were secure behind the shield and weapons of this champion, for Jly had flattered him into ringing filth, and he can throw the dirtiest pen in the School. But these Milwaukee Youngsters beat him with his own weapons, and Jly thinks he would do to rely on again. He has lain dormant ever since.

Another western Champion of our cause made the foolish

of calling the Test "an awful dodge" and said that we were too smart to fall into "this trap" spread for our feet by the Hahnemannian Society. Therein, to use a slang expression he "let the cat out of the bag" and showed to the world the weakest point in our armor. He is disgusted with him.

In despair we turned to England to the new Island-Organ. But the editors on that side partly endorsed the Test before they had canvassed with us, and then had to lie out of it, which looked badly.

But at last the cloud seems breaking, the light shines upon our heavy hearts. Dr. — has come forward with a plan to save our cherished idols from destruction. It is this: —

At the next session of the Institute a Committee will be appointed by the President, a true Hahnemannian, to take charge of a test of the 30th potency. The Bureau of Materia Medica must not be allowed to manage it, altho it naturally belongs thereto, for there are too many low-potency men of ability on it, who would want to put awkward safe-guards around the Test. Dr. — the originator of this plan must be the Chairman; his are the only "proper hands" in which to place it. Several high-potency men, as old as possible, are to constitute the majority of the Committee, with a few weak easily-gulled low men thrown in for appearance sake. The officers of the Institute will be obtained to give the announcements or official appearance, and by attracting the attention of readers to the noble head of Hahnemann within the well-known oval scroll, to prevent their looking too closely into the arrangements. A safe-pharmacist will be selected to prepare the potencies, one who is fully committed to the high-potency dogmas, and who employs a number of boys

is establishment. If he is very myopic, all the better. The
made by him on the Centesimal Scale (but moving by de-
imals, with one hundred successions to each attenuation,) will
be placed in the custody of two of the eldest and most
high potency physicians we have, as far removed from
as possible, say one in New York and the other in
Chicago. Men who are easily flattered will be chosen and if you
know one who is fond of being called the "Nestor of Western
Homoeopathy," or who spells Spica thus: Epica; and bilious
thus: luc, send us his name in confidence; he will be selected.
I don't want any unprejudiced layman in our Test.

These safe depositors then medicate one vial in ten, or
two, as the case may be, and turn them over to Dr. _____,
who proposes to name the drugs, (of which he is supposed to be
perfectly ignorant,) at the next session of the Institute, by
the use of their power on the sick and the healthy. He has al-
ready secured a dozen indigent students in his class, and pro-
poses to have them board and washing for the winter in remunera-
tion for the provings they are expected to make. If their
provings don't suit him he will not let them pass his chair
at the graduating examination.

With these safe-guards against any inimical results,
with the endorsement of the American Institute behind him,
and with an low-potency man of any ability to embarrass
him, he expects to succeed in convincing all skeptics that
there is medicinal power in the 30th potency, even more,
and make them acknowledge that the 30th is better than
the 3rd.

If, enslaved by their prejudices, they refuse to acknowledge
this, we will throw them out of the School, and cut off

be purged from their organ, the new Hahnemann
Then Winslow will hide his head, Sherman will go back
to his Pharmacy; Potter will grind out logic to the Eclectics
Paine will turn to politics; Drake will study yellow-fever
germs and Brezfoyle will polish the lenses for him; while
Conrad Wesselhoef will be condemned to burinate Carb.
Vegetabilis forever under the foot of the immortal Hahnemann
in the spirit land.

Then will Hg be acknowledged as the vice-regent
of the Master upon earth; Lippe, his Secretary of Foreign
Affairs; Skinner, Tindie and Swan, the Chief bottle-washers
of the temple; Pearson, Captain General of Inquiries
and Jones, Borborygmia High Priest of the Altar.
Then will pure Hahnemannism be the Science of
Medicine, the atomic theory be burst and all the
crude drugs be declared poisons.

If each one to whom this letter shall come
will do his individual part at the next session of the
Institute, this glorious plan will succeed, heaven
will rejoice, and all the earth be glad.

Yours fraternally, Yours in Hahnemannism
A. Duffen Horn, M.D. } Executive Committee
Jony E. A. Haring, M.D. }

MUNCHAUSEN MICROSCOPY.

COMMENTS ON

THE WORK OF A MICROCRITH.*

BY SAMUEL POTTER, M.D., MILWAUKEE, WIS.

THE homœopathic colleges are again fighting over the question of the infinite divisibility of matter and its applications as a potentizer of drugs, though the accumulated knowledge of the centuries since Anaxagoras has consigned the first to the limbo of mysticism, and the scientific thought of to-day has left the second to the possession of infinitesimal minds. From Cleveland and Boston we hear contending cries, snappish snarlings over the rotten bones; one voice exclaiming from the lake-shore sedge, "You shall not conquer *me*;" the other replying from the Atlantic, "Nor assuredly shall you *me*;" while from an inland pond comes the Bacchanal *demi-falsetto*,

"**Koax, koax**, *never* shall you conquer *me*; for I will screech

Brekekekex, koax, koax, even all the day, 'till *I* overcome your koax."†

And forthwith the Picric-Pathological-Pepper-box exhales from the Michigan marsh, and its professor astonishes the profession with another new discovery, "**Brekekekex, koax, koax**."

This Jonesonian movement (of a particle of gold) is an advance upon its predecessor, the Brunonian. Evidently that metal does not like the erratic, trembling motion of the latter, so it tilts like a crinoline, turning "over and over until it" catches "against something," when it remains a "permanent,

* For the benefit of non-microscopical readers it may be mentioned that a microcrith, unmetaphorically, is a *very light weight*.

† Aristophanes, Frogs, line 268 et seq.

glittering spark ;" but not before it has changed place "in an ascending straight line the while;" mark, ye symptomatologists, not a crooked line, but an ascending straight one. This is the keynote symptom. When we recognize it we shall be sure that the movement is Jonesonian, not Brunonian; for the characteristic feature of the former movement is, that though seemingly erratic, in the estimation of the possessor it is always in *ascending straight lines*. Another marked feature is its temporary duration, only lasting long enough to be seen by a professor and his assistant. The remedy which has been most strongly verified by clinical experience in this condition is Picric acid (Dunham's 200th).

A feature of Professor Samuel A. Jones' discovery, more difficult to understand however, is the transmutation of a particle of gold into a "spark." He says "it remained a spark," and again, "my spark was a particle of gold." In their wildest dreams the alchemists had no such lofty conception of the transmutation of metals as this. What a novelty in physics! What a discovery for the Michigan University to plume herself upon!

The professor does not say how the particle was recognized, so we cannot tell "for sure," as the old lady says, whether he saw it or not. If it was recognized as gold because "it remained a spark," the reason is utterly worthless. Diamonds sparkle, so does fractured glass, so might a particle of brass, which might perhaps fall upon the stage from the impending brazen mass above. He and his readers must remember that "all is not gold that glitters."

A charitable mind will, of course, grant that he thought he saw a particle of gold, as also that his assistant did, to whom he refers. It is so convenient to have a reference. But, then, we remember that a man once saw an elephant in the moon, or thought he did, it turning out to be a mouse in his telescope. Last year this same discoverer "saw," or thought he did, a blood-corpuscle undergoing the pains of fatty degeneration from Picric acid.* Then, as now, he referred to his assistant, who was even so obliging as to furnish the blood. From the tenor of their last article it would seem that *the assistant*, at least, has not followed the example of his blood-corpuscle, and undergone fatty degeneration.

But if he saw a particle of gold in the 9^x trit., as he says he did, is he not a traitor to his newly-espoused bride, a foe to

* See Homeopathic Times for 1878, pages 2, 72, 94, 101.

the *soi-disant* "pure homeopathy," to publish such a damning fact? In so doing, to use his own language, he has dared to "arraign the clinical testimony of nearly a century; to unsettle the belief of thousands; to throw doubts upon the ablest of (his) predecessors and of (his) contemporaries," in declaring that a particle of gold, which, according to Hahnemann, Hering, Lippe, Swan, Skinner, *et hoc genus omne*, should be not greater than the $\frac{1}{100000000000000000000}$ of an inch in diameter, has a diameter actually as large as the $\frac{1}{84000}$ of an inch? Will Hering write him that this result is "a masterpiece?"

If lines the $\frac{1}{200}$ of an inch apart are the nearest *definable* by the naked human eye with the best illumination,* and an object the $\frac{1}{1125}$ of an inch in diameter is barely *visible* by the same illumination to the unaided eye,† the smallest visible object under the microscope would have a diameter similarly proportional ($\frac{200}{1125}$) to that of the smallest object which that instrument can define. The latter, so far, being the $\frac{1}{112700}$ of an inch (the spaces between the lines of Nobert's 19th band), the former would be nearly the $\frac{1}{634000}$ of an inch. But according to the dynamization theory of the advanced purists, the self-styled "Hahnemanniacs" with whom Professor Jones has lately cast his lot, the potentization of a trituated metal is obtained by so minutely dividing the particles as to afford greater surface for solution, and this divisibility they claim to take place directly in the ratio of the attenuation. Any one who has access to an ordinary physician's microscope and a ruled micrometer, may see that the average diameter of a particle of *Aurum præcip.* in the crude will not exceed the $\frac{1}{100000}$ of an inch. Following the high potency dynamization ratio, this particle should be reduced in order to expose the same surface to the diameter of the $\frac{1}{100000000000000000000}$ of an inch in the 9^x trit., and would be utterly beyond the ken of any but Ann Arbor microscopists. The inevitable conclusion must be, either that (1) the high potency dynamization theory of the divisibility of trituated substances is a fraud, or (2) that Phin's and Ehrenberg's data are false, or (3) that Professor Jones' microscopy is a "beautiful specimen," as they say in the mining regions of his State, of the operation of the law which Carpenter calls "mental expectancy," *i. e.*, that he sees in his microscope whatever he wants to see.

* John Phin, Editor of the American Journal of Microscopy, in *How to Use the Microscope*, 2d edition, New York, 1877, page 73.

† Prof. Smith on Ehrenberg's Limit of Visibility, in May issue of this journal.

Another curious result may be deduced from Professor Jones's observations. He says that the limit of his microscope, "up to date, is 1 grain of gold to 1,000,000,000 of sugar of milk." If this means anything microscopically, it is that, as shown above, he can see a particle the $\frac{1}{1000000000000}$ of an inch in diameter. On the very next page, reasoning from a dishonest statement of the size of the atom,* he says that to make the $\frac{1}{250000000000}$ of an inch visible would require *an objective of 218,222 diameters greater than the optician's skill has yet produced*. Yet his objective shows the $\frac{1}{1000000000000000}$ of an inch; therefore, by his own ratio, it must have a magnifying power of 8,888,880,000 *diameters "greater than the optician's skill has yet produced."* Where, it may be properly asked, did he get such a lens? If not produced by human skill, was it made in heaven or in hell? Or was it evolved from the inner consciousness of Professor Samuel A. Jones? Did he potentize an ordinary lens by his friend Hering's method of a few years back, namely, by administering to it a single dose of Silicea²⁰⁰⁰, or of a more potent remedy, *Mendacitas Jonesii*^{cm}? Had not he and his microscope better quit Ann Arbor for more remunerative employment? The National Board of Health will guarantee them more than a professor's salary at hunting down yellow-fever germs; while the authorities of the Army Medical Museum in Washington would undoubtedly put them both on a marble pedestal under a glass case, if they should happen, as is most likely, to succumb to the complication of Hering-flattery and fatty degeneration of blood and silex in their efforts for scientific renown. "The $\frac{1}{1000000000000000}$ of an inch to date." Great shade of Hahnemann! crane your neck over the high arch of heaven, and behold what potentization under Hering's smile will do! If Professor Jones, his microscope, and his patron survive, what number of ciphers must be added twenty years hence to get at their limit of visibility!!

Again, Professor Jones quotes Ehrenberg, that a particle of gold measuring $\frac{1}{125}$ of an inch is visible to the naked eye in common daylight, and bases his criticisms on Professor Wesselhoeff's observations and conclusions on this statement, which, forgetting his Latin, he puts in the plural, and calls "*data*;" a term, however, no more awkward or incorrect than those in which he avows his ignorance of English: "these *be* plain questions."—"Let $\times \times I$ be levelheaded."

* *Vide* paper entitled Molecular Magnitudes, by the author, in the May issue of this journal.

This is no less ungenerous and deceptive, to use no harsher words, than his equally delusive and incorrect statement concerning the accepted size of the atom.* Professor Jones knows, if he knows anything, that no human naked eye ever saw, to define it, an object having a diameter of the $\frac{1}{1125}$ of an inch.† Any one may test this for himself. Mr. John Phin‡ says: "With the best illumination the human eye can just clearly distinguish lines which are the $\frac{1}{200}$ of an inch apart." Yet Ehrenberg says that a line is easier seen than a dot.§ Professor Jones confounds visibility with definability, taking the *smallest* dimension he can find, without regard to the sense in which it is used; but for the atom he uses the *largest* diameter attainable, because these extremes will best serve his purpose; and he builds upon them a criticism attacking the reputation of a colleague. Such a course might be ascribed to his superficial knowledge (he never consults encyclopædias and terms those who do "callow fledglings"||), if the use he makes of the deceptive dimensions were not wholly to his own advantage. It must rather be ascribed to the abnormal development of his spleen, or his jealousy of the fame of his Boston colleague. He challenges Professor Wesselhœft's "competency for such a microscopic examination." Will not any one who sees his one-sided misrepresentations in the above instances equally challenge his competency in respect of the following qualifications laid down by Frey as essential to a microscopist:

"Acute mental organs, calmness, love of truth, and talent for combination. . . . He who has not these, . . . the impartiality of whose observations are constantly disturbed by a *lively, excited imagination*, should keep away from the microscope as well as from the practice of medicine."¶

The Ann Arbor microscopy is truly unique. Evolved, like Jenichen's high potencies, in the atmosphere of a stable,** one might expect to see in its features a trace of some horse-sense, or even the reflection of the intellectuality of a more ignoble

* *Vide* paper entitled Molecular Magnitudes, by the author in the May issue of this journal.

† Professor Jones does not use the word "diameter," but "size." It is presumed that he meant the former, for he is evidently ignorant of the proper use of the latter term; which, in physics, when unqualified, always means superficies or volume.

‡ Op. cit., p. 73.

§ Professor Smith, in May HAHNEMANNIAN.

|| See his last Open Letter in the June HAHNEMANNIAN.

¶ Frey, *On the Microscope*, 4th edition, New York, p. 96.

** The laboratory of the Homeopathic Dept. University of Michigan is in a stable adjoining the "Saints' Rest" of Professor Jones.

though more patient animal. But the only lineaments it reflects are those of the Cloaca, where the professor evidently spends considerable time.* Smeared all over with filth, and the most exalted self-conceit, its only aim is the defeat of all those who are skeptical on the infallibility of its author, by the use of gross vituperation and the coarsest witticism. Should such a one question the conclusions or statements of this self-styled 'expert,' his armor is carefully sounded for the slightest flaw, and if one is found the Michigan microwasp† immediately drives in his sting, careless of professional courtesy, and reckless of truth and honesty. One may easily imagine how he and the never-failing maid of all work, the assistant, hornetlike pounce upon each stray wanderer into their broad fields of research. Well might Wessellhoeft, Hale, Allen, Couch, and Franklin exclaim with Job, in their bitterness of heart, of these tormentors: "Among the bushes they brayed; under the nettles they were gathered together."

Professor Jones evidently does not like Thomson with a *p*. Since the collapse of his Picric-Acid-Fatty-Degeneration-of-Blood-Discovery, he has never liked any word in which the letter *p* is prominent. It stirs up memories which are best buried for him. But "Thompson with a *p*" smells just as sweet as without one to Cooke, Sherman, Mott, Curtis, and many other writers, who quote the name. In his attempt to slip out of the corner on atomic magnitudes, making such a point as the above, while ignoring what we must for sweet charity's sake suppose to have been a mistake (!) of at least fifty sizes of an atom, he makes the best living illustration of one of those Pharisees, "blind guides, who" strained "at a gnat," but swallowed "a camel."

If any one will take the trouble to wade through the April effusion of this pseudo-microscopist, he will find that all the professor accomplishes is the airing of his own self-conceit and ignorance. He speaks of *diameter* as "*size*;" confounds the *visibility* of an object with its *definability*; uses the term *atom* for *molecule*, and the maximum size of the latter, as the "accepted size" of the former; speaks of a single statement as "*data*," instead of *datum*; says of questions, "*these be plain*;" showing himself to be only a pretender in chemistry, physics, and microscopy, as well as incapable of using the Latin or the English languages correctly; and finally, in his latest emana-

* See his last Open Letter.

† Professor Jones cannot object to this appellation, as he lately assumed the figure of a wasp as his crest, which he flaunts on his cards and letter paper.

tion, he proves himself utterly ignorant of the most ordinary arithmetical operations,* sneers at the authority of such a man as J. Clerk Maxwell, D.C.L., F.R.S.,† whose words Professor Jones terms “encyclopaedic filterings,” and winds up by repudiating the atomic theory and dribbling about the “perception by consciousness” of the “30th mode of motion of Arsenic.” Were he, instead of Paul, arraigned before Festus, the Roman governor would have said, “Jones, thou art beside thyself, much ignorance hath made thee mad.”

Near the close of his first letter on this subject Professor Jones asks, “Now why may not a homœopathic therapist, as well as an old-school physiologist, apply the ‘physiological test’ to determine the presence of a quantity too minute for chemical tests?” and prefixes this query with the statement that he feels that “the human body alone in health and in disease can determine the potency question.” He assumes that the potency question is undetermined, for which Hering will not thank him, and asks the same question which the Milwaukee Academy of Medicine propounded to him when inviting him to join in the “Test of the efficacy of the 30th dilution.” I will permit Professor Jones to answer for himself, and show to his own and the profession’s eyes how consistent he can be within a space of less than three months. I quote from his reply to the Milwaukee circular: “*I have no need of such a test as you propose. . . I have no time to spend in or on superfluous work.*” Were he asked to examine triturations of gold numbered to correspond with sealed envelopes, in each of which was deposited a description of the trituration it belonged to, we may infer from analogy that he would make the same reply as he did to the test of phials numbered but not named. He would “have no time” to spare from the study of the dictionary of slang; from unloading his dirty diatribes, his deceptive, diaphanous, delusive flatulency of filthy invective.

If, in this criticism of what I can only term the Munchausen microscopy of the Michigan microcrith, I have seemed to depart from the *suaviter in modo* which “Senex” inculcates, my excuse is the proverb of the Hebrew sage: “*Ghanêh kesil keib-baltô pen-yihyeh châkhâm beg'hainan.*”‡

* For example, the subtraction of fractions. *Vide* his extraordinary difference of 16153 between $\frac{1}{30000}$ and $\frac{1}{45153}$ in his last Open Letter. A ten-year old “fledgeling” would express the difference between these fractions by $\frac{16153}{13845500000}$, or the ratio between them as nearly $\frac{2}{3}$.

† Professor of Experimental Physics, University of Edinburgh, Author of the article Atom, in the 9th edition of the Encyclopædia Britannica.

‡ Proverbs xxvi: 5.

SIGNS OF THE TIMES.

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BY SAMUEL POTTER, M. D., MILWAUKEE, WIS.

[Read before the Wisconsin State Homœopathic Medical Society, June 14, 1880.]

"THE signs of the times" was a favorite expression a few years ago, but the rapid multiplication of "signs" during our fast generation has made the masses less mindful of them.

When on the war-path in a hostile country, the keen-eyed scout bends low over his saddle-bow, eagerly scanning every inch of ground within his vision's bound for a "sign" of the treacherous foe. When one is found, how quickly is it surrounded, measured, marked, and judged, and only abandoned in quest of one more clear! But soon the "signs" become more numerous; every soft spot shows the print of recent steps; the broken bush, the beat-down grass, all betoken danger. The eyes of scout and soldier are no longer bent earthward, but right and left, front and rear, watching for the first movements of the foe whose presence feels so near. So, in days like these, the world moves on with rapid giant-strides; and footsteps which, a century ago, "echoed down the corridors of time," have become so numerous that we hardly notice them. But they are no less eloquent to the listening ear.

Some of the medical signs may have an interest for homœopaths. There are many, and they are marked, which prophesy a change in the spirit of our dreams. What we have hoped for is now being freely given; nearly all that our school has united in demanding seems to be in process of accomplishment. I will not go over the list of offices, State and national, held by our brethren at this time; nor the increasing favor shown to our school in every State of the Union. I am thinking, as I write, of professional signs alone.

For many years we have heard with avidity of every instance of the recommendation, by an allopathic writer, of drugs for the cure of conditions similar to their physiological effects. Such evidence of the truth of our central law some of our leaders have invariably denounced as "stealing," forgetting the indisputable fact that the same prescriptions were made by physicians cen-

turies before the name "homœopath" was coined, or the law of similars formulated. In this ungenerous manner have they repelled whatever evidences of good-will were apparent in the utterances of our elder brethren; holding up the black flag of hate, and shaking it in the face of all men, they have hissed forth our shibboleth, and all but cursed those who could not utter it with our exact intonation. Such, I think, has been the homœopathic side of the discussion.

I prefer to show wherein one of our very excuses for existence is being done away with, by the honest credit given to our system, its founders, and its leading men, by some recent old-school writers.

So long as Hahnemann's great name was blotted out from the history of medicine as taught by the dominant school, every principle of loyalty and gratitude taught us that the sect which he founded should continue to honor his memory by a distinctive banner. But Ringer and Phillips of England, and Piffard of New York, have lately taken a course in this respect which cuts the very ground from under our feet; or, to use a nautical phrase, "takes the wind from our sails." That is to say, they have set the example of doing justice to Hahnemann and homœopaths, which doubtless will, ere long, be followed by many leading old-school teachers.

Professor Ringer, of the London University, in his "Manual of Therapeutics," quotes as authorities for trustworthy uses of drugs, our well-known names, Dr. Richard Hughes, Dr. Bayes, Dr. Fleischmann, Dr. Preston; and speaks of the "signal success" of phosphorus "in neuralgia, in the hands of homœopaths," as restoring to favor a drug which "had for many years fallen into disuse."

Professor Chas. D. F. Phillips, of the Westminster Hospital School, in his "Manual of Materia Medica and Therapeutics," quotes one of our Western stars, Professor E. M. Hale, and his "New Remedies"; and in hundreds of passages bears witness to the truth of the law of similars.

But it is to Dr. Phillips' American editor, Professor H. G. Piffard, of the University of the City of New York, that the greatest amount of credit is due in this direction. Not content with the insertion of articles upon drugs considered heretofore by his own school as almost exclusively homœopathic property, such as *Glonoinum*, *Euphrasia*, *Hanamelis*, *Iris*, etc., he bears witness in the following manly words to the labors of homœopaths:—

Glonoinum.—"Its physiological effects were first studied by Dr. C. Hering (homœopath), of Philadelphia, in 1848, since which time it has been experimented with by many, who, without exception, confirm the more prominent phenomena described by him."

Belladonna as a Prophylactic against Scarlet Fever. — "When Hahnemann first asserted this power, but five years had elapsed since the publication of his peculiar ideas concerning the remedial action of drugs . . . little effort was made either to confirm or refute this pretended discovery, so important if true. Hufeland was one of the first to examine the question experimentally, and as a result gave his adhesion to the affirmative view. Since then much evidence has been collected on the subject, and the preponderance is certainly in the same direction."

Digitalis. — "Dr. E. M. Hale, of Chicago, suggests that an infusion be made with boiling water, and when cold, strain, and to twelve ounces add two ounces each of alcohol and glycerine."

Dr. Piffard's utterances on some of the hitherto mooted points in medicine are giant strides towards a liberal therapeutical science. He must be a brave man to write thus:—

Podophyllum. — "If the larger dose is too active, it is simpler and better to diminish it than to complicate its action with an additional ingredient. The tendency of the present age is toward mono- rather than polypharmacy, and prescriptions with the orthodox 'adjuvans' and 'corrigens' are less frequently seen than formerly."

Ignatia. — "There is a decided difference between the finer effects of Ignatia and Nux Vomica that is not explainable by the results of chemical analysis; comparative clinical experience, however, will quickly demonstrate this to the careful observer."

Atropia as a Mydriatic. — "Dr. D. B. St. J. Roosa . . . states that he has seen dilatation result from $\frac{1}{200000}$ of a grain, and Dr. Ely from $\frac{1}{40000}$. Trousseau and Pidoux refer to an instance in which a dog's pupil was dilated for eighteen hours by the $\frac{1}{250000}$ of a grain. Lastly, Dr. E. G. Loring, of this city, states . . . that he has dilated his own pupil for twelve hours with the $\frac{1}{400000}$ of a grain."

Pulsatilla. — "The most available preparation at present attainable in this country is the imported homœopathic tincture."

Thuja. — "Little has been recorded on this subject [its physiological action] except by the homœopaths, who, in one treatise, devote one hundred and fifty pages to the subject."

Should such instances multiply, the historical reason for the separate existence of the homœopathic school will have passed into oblivion before the eyes of the present generation. With the adoption of the small dose, and physiological as the basis of the therapeutical action of medicinal substances, all the distinctive features of homœopathy will have been assimilated by the old school, except the Hahnemannian pathology (psora-theory), the dynamization doctrine, and the wild vagaries of fluxion potentizers, and of those mystic myth-regenerators who expose sugar of milk to the direct rays of the sun, or those reflected by the moon, and labelling it *Sol.* 30th, or *Luna* 200th, after certain processes of manipulation, go forth in the night of superstition, and encased in the armor of mysticism, to perform "most wondrous cures."

The records of all time show that reforms never live long as the bases of independent, distinctive organizations. Sooner or later the reform idea becomes less sharp, its features less characteristic, and such of its principles as are founded on eternal truth become absorbed by the great mass of society. The rest dies, after a feeble existence, and soon the name is but an historical curiosity. Instances of this in the history of laws, of politics,

and of religion will suggest themselves to any student. Even the greatest of all reforms, Christianity, may to-day be seen in its second stage of declination, — fatty degeneration. At first persecuted and helpless, its principles rapidly permeated and purified society, until it wedded the State, and became a political organization, and a synonyme for cruelty, tyranny, vice, falsehood, and every species of infamy. The Protestant Reformation infused new life into the half-putrid mass of dying religion, and for a century or two Christianity again lived a power in the world. But now, grown fat and lazy, the Protestant reform has divided into social organizations, where modes of dress, theatrical amusements, and all the vices of society threaten to usurp the place of those principles of action and thought which made England glorious, and the names of Vaudois, Huguenot, Puritan, and Waldensian synonymes for earnest piety and true religious character.

In ancient times three great sects swayed the world of medical thought: (1) the *Dogmatists*, whose great principle was, that to cure a disease we must know its *cause*; (2) the *Empirics*, who looked on medicine solely as an art, and upheld *experience* (which Hippocrates held to be “fallacious”), or what is nowadays called the “practical,” as the *summum bonum*, the medical court of last resort; (3) the *Methodists*, or Routinists, who first classified diseases. Following these came the Hippocratican *tripod*, the supports of which were Reason, Experiment, and Tradition. Hippocrates, in his day, therefore, represented the true liberal in medicine, the genuinely, not the falsely named Eclectic. Next Asclepiades advanced the still extant exposition of a proper cure “*tuto, cito, et jucunde*.” The Pneumatists next swayed the medical mind, until Galen’s “*contraria*” and polypharmacy overwhelmed it. The Chemists, Humorists, Mathematists, Vitalists, and Stimulists, the Hallerians, Cullenites, and Brunonians, rose, one after the other, on the ashes of the preceding theory. Name after name stands forth in blazing characters, — Avicenna, Dioscorides, Bacon, Cardan, Paracelsus, Helmont, Harvey, Descartes, Boyle, Sydenham, Stahl, Hoffman, Boerhaave, Haller, Cullen, Brown. *All have passed away*, but each system, each leader, left a mark, an impress on general medical knowledge. Will Hahnemann prove *the only exception* to this general law? A thoughtful student must answer, No! homœopathy must pass into history, having, like all the other systems, left its imprint on the great profession. The inexorable logic of the past teaches us that the sect which Hahnemann founded will become absorbed by the ancient catholic medical church.

The evidences of this absorption are numerous. I recently attempted to show, in tabular form, the similarity between the present practice of the therapeutists of both schools in the

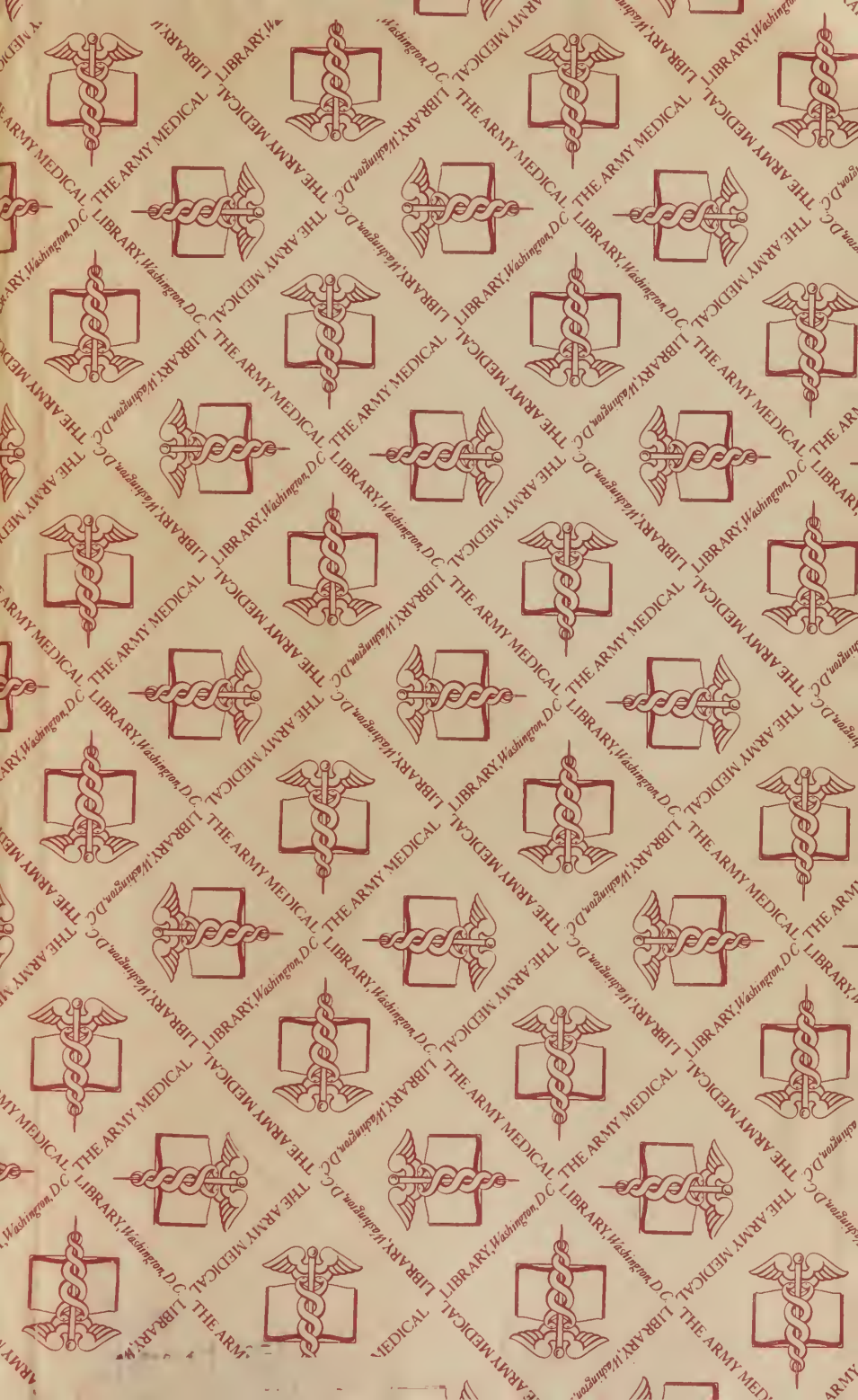
treatment of dysentery and scarlet fever.* The same is equally true of the treatment of every dynamic disease ; and similarly, along the entire line of dynamic diseases, "regular" therapeutics now reads like the record of a homœopathic dream.

"But," my readers will say, "to what does this tend? Should homœopathists abandon their organizations, haul down their flag, and surrender unconditionally to their life-long foes at the first sight of a white flag?" I answer, By no means! Until full justice is done to the memory of Hahnemann, — until the law of similars receives the unreserved and unqualified recognition which we believe it deserves in the treatment of dynamic diseases, — until the single remedy has driven Bourbonic polypharmacy from the scientific (!) field, — until physiological experimentation has taken the place of crude theoretical classification, as the only proper basis for the therapeutic application of drugs, — until these things are accomplished through the influence of homœopathy, its flag must wave aloft wherever sick humanity lies ; its name must stand forth in letters of fire to point the way to a still more scientific method of therapeutics.

But, with all our pride, let us remember to carry humble hearts before the great altar of TRUTH. Homœopathists must ever keep before their eyes the teachings of the analogy of past events ; and, remembering that sooner or later their name will have passed into history, should occupy the present in purging their materia medica of old-women's whimsicalities, and the senile imaginings of old-men-children, which crowd its pages. Drugs must be reproven, under scientific safeguards, and the homœopathic materia medica handed down to the amalgamated profession of the future, cleansed by the hands of Hahnemann's disciples. Then homœopathists will be ready to resume their places at the altars of Æsculapius, with a gift to the god which will merit the crown of immortality.

* *Vide* "Studies in Therapeutics," NEW ENGLAND MEDICAL GAZETTE, January, 1880, page 17.





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